Candidate Conservation Agreement with Assurances for Texas Hornshell Mussel (*Popenaias popeii*) and Other Covered Species

New Mexico Commissioner of Public Lands and U.S. Fish and Wildlife Service

August 14, 2017, 2017

This Candidate Conservation Agreement with Assurances (CCAA, SLO CCAA, or Agreement), effective and binding on the date of the last signature below, is between the New Mexico Commissioner of Public Lands (Commissioner) and the U.S. Fish and Wildlife Service (Service) (referred to herein as "Party" or "Parties"). This CCAA is a programmatic agreement under which lessees or grantees of state trust lands[1] (collectively herein referred to as "Lessees") can voluntarily participate in and receive the benefits of the CCAA by signing a Certificate of Inclusion, subject to approval by the Commissioner and concurrence by the Service. Lessees that have signed a Certificate of Inclusion are referred to herein as "Participants" or "Participating Lessees."

Administrators of this Agreement are:

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Service: Debra Hill
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Tracking Number:

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[1] A lessee or grantee of state trust lands is eligible to participate in this CCAA under the definition of Property Owner as "a person with a fee simple, leasehold, or other property interest (including owners of water rights or other natural resources), or any other entity that may have a property interest, sufficient to carry out the proposed management activities, subject to applicable State law, on non-Federal land." 50 C.F.R. §17.3.

1. Authority

Sections 2, 7, and 10 of the Endangered Species Act (ESA) of 1973, as amended, allow the U.S. Fish and Wildlife Service to enter into this CCAA. Section 2 of the Act states that encouraging interested parties, through federal financial assistance and a system of incentives, to develop and maintain conservation programs is a key to safeguarding the nation's heritage in fish, wildlife, and plants. Section 7(a)(1) of the Act requires the Service to review programs that it administers and to utilize such programs in furtherance of the purposes of the Act. By entering into this CCAA, the Service is utilizing its Candidate Conservation Programs to further the conservation of the nation's fish and wildlife. Lastly, section 10(a)(1)(A) of the Act authorizes the issuance of permits to "enhance the survival" of a listed species.

The Commissioner of Public Lands has jurisdiction over, and is authorized to have the discretion, control, care, and disposition of all state trust lands pursuant to Article XIII, Section 2 of the New Mexico Constitution and NMSA 1978, Section 19-1-1, and to execute contracts and other instruments affecting state trust lands pursuant to NMSA 1978, Section 19-1-2.

2. Covered Species

This CCAA covers the Texas hornshell mussel (*Popenaias popeii*), Rio Grande river cooter (*Pseudemys gorguzi*), gray redhorse (*Moxostoma congestum*), blue sucker (*Cycleptus elongatus*), and Pecos springsnail (*Pyrgulopsis pecosensis*) (Covered Species).

3. Purpose

The purpose of this CCAA is for the Service to join with the Commissioner and Participating Lessees in implementing habitat protection or improvement projects and land management or water use practices aimed at protecting or restoring habitat for the Covered Species, in a manner that is consistent with the Service's Policy on Candidate Conservation Agreements with Assurances (81 FR 95164) and applicable regulations. The CCAA provides incentives to the Commissioner and its Lessees to implement the conservation practices described in this Agreement by providing them with regulatory certainty concerning land or water use restrictions that might otherwise apply should the Covered Species be listed under the ESA. The overall condition of state trust lands will also be maintained or improved by the implementation of the CCAA.

Through this CCAA, the Commissioner will protect the Covered Species by encouraging and implementing landscape- and watershed-based conservation that also benefits the overall ecosystem. The specific conservation goals of this CCAA are to protect the existing populations of the Texas hornshell in the Black River and to support efforts to reestablish a Texas hornshell population in the Delaware River. The broader conservation goals of the CCAA are to protect and restore habitat for the benefit of multiple species, including the four other Covered Species, within the Covered Area (see Appendix A) to prevent the need for future ESA listings.

Participating Lessees will contribute to these goals through implementation of Conservation Measures as agreed upon in their individual Certificates of Inclusion (CIs). The Conservation Measures developed for this CCAA are generally focused on refraining from or minimizing the impacts of activities that could negatively affect the Covered Species, such as avoiding certain ground disturbing activities in or near life history sites, reducing or curtailing water use when river flows are low, or managing sediment and storm water runoff. Conservation Measures are described in more detail in Section 9.

The Commissioner will implement Conservation Projects on state trust land using qualified contractors selected through an open bidding process. Conservation Projects are projects that are intended to protect or improve habitat for the Covered Species, such as stabilizing or revegetating streambanks and riparian areas, re-establishing native vegetation in upland areas to reduce erosion, purchasing or leasing water rights to ensure adequate flows are maintained for life history sites, or constructing sediment traps. Conservation Projects can also include Participating Lessees' in-kind services (see Section 12).

The Commissioner's enrollment of all state trust land within the Covered Area will have significant long term benefits for the Covered Species by providing by current and future Lessees the opportunity to participate in the CCAA. Through this Agreement, the Commissioner can encourage and support existing and future Lessees' efforts to maintain and improve habitat for the Covered Species so that revenue-generating activities can continue for the benefit of the Lessees and state trust beneficiaries.

The Commissioner has a constitutional mandate to generate revenue for schools and other beneficiaries of the state trust while ensuring that state trust lands are taken care of now and in perpetuity. Nothing in this agreement may, or is intended to, modify or limit the authority of the Commissioner to act in the best interest of the trust.

4. Relationship to other Agreements

The structure and implementation of this CCAA will be closely coordinated and integrated with the Center of Excellence (CEHMM) Candidate Conservation Agreement for federal lands and Candidate Conservation Agreement with Assurances for private lands (referred to together as "CEHMM CCA/A") for the same Covered Species through a memorandum of agreement (MOA) between the Commissioner and CEHMM. The primary goals of the cooperative relationship described in the MOA are to:

- avoid duplicating enrollment costs and provide consistency in implementation for participants that want to enroll in the SLO CCAA and the CEHMM CCA/A;
- coordinate and collaborate on Conservation Projects for the Covered Species; and
- foster a landscape- and watershed-based approach to species conservation that draws on local knowledge and the best available science.

The MOA may be amended from time to time as agreed upon by the Commissioner and CEHMM to improve implementation of the candidate conservation agreements. Should the MOA between the Commissioner and CEHMM be terminated prior to the expiration of this CCAA, the Commissioner shall seek to enter into a new MOA with another conservation entity to effectuate the purposes of this CCAA. Although the intent is to implement this CCAA in collaboration with CEHMM, this CCAA can be implemented independently of the CEHMM CCA/A and shall remain in effect unless terminated pursuant to Section 26 (Permit Suspension or Revocation) or transferred pursuant to Section 29 (Succession and Transfer).

A. CCAA Administration

CCAA Administration includes those activities necessary to administer and implement the Commissioner's responsibilities under the CCAA, such as enrolling participants, conducting site visits, monitoring and reporting, and providing assistance to Participants.[2] The Commissioner shall assign State Land Office (SLO) staff to carry out the duties and tasks associated with CCAA Administration. To ensure that Participants' needs are met if SLO staff is unavailable, the MOA also provides that CEHMM can perform CCAA Administration for SLO CCAA Participants upon the Commissioner's written request.

B. Integration with CEHMM CCA/A Committees and Technical Working Groups

The SLO CCAA will have an Executive Committee made up of the Commissioner or the Commissioner's appointed representative, and a representative from the Service. Pursuant to the MOA, the Executive Committees for all of the candidate conservation agreements for the Covered Species will meet at least annually to discuss matters of mutual concern.

The Commissioner shall provide staff to participate in the Stakeholder Committee, Implementation Committee, and Technical Working Groups as described in the final CEHMM CCA/A. Integration at the committee level will promote consistent implementation of the candidate conservation agreements, as well as the selection and prioritization of Conservation Projects.

C. Uniform Conservation Measures and Management Zones

Conservation Measures are those measures that Participating Lessees agree to perform as part of their CIs. Conservation Measures are avoidance and minimization measures to preclude or reduce threats to the Covered Species that Participants in this CCAA agree to implement, such as avoiding new surface disturbances in or near life history sites or drainages, reducing or curtailing water use when river flows are low, or managing sediment. Conservation Measures are tied to "Management Zones," which are delineated areas within the Covered Area that reflect the proximity to or

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[2] The CEHMM CCA/A includes CCAA Administration and Conservation Projects under the term "Conservation Actions," defined as "actions that preclude or reduce threats to the Covered Species, including daily implementation of the agreement (e.g., species monitoring and onsites) performed by CEHMM, and mitigation measures that are implemented or funded by Participants via this CCA. Conservation Actions may include in-kind services as well as proposals that are funded by the Implementation and Executive Committees." The SLO CCAA distinguishes between CCAA Administration and Conservation Projects to provide consistency with the terms of the MOA between the Commissioner and CEHMM and how the use of Participant funding will be reported.

influence on the habitats for the Covered Species (see Appendix A and Section 9). This CCAA will use the same Conservation Measures and Management Zones as the CEHMM CCA/A.

5. Responsibilities of the Parties

A. Commissioner

The Commissioner shall implement and administer the CCAA as follows:

(1) Provide staff and resources necessary to carry out the Commissioner's responsibilities described in this CCAA.

(2) Oversee implementation of Conservation Activities and Conservation Projects on state trust lands to benefit the Covered Species.

(3) Encourage current and future state trust land Lessees within the CCAA project boundary to participate in the CCAA through CIs:

a. Upon approval of this agreement, contact existing Lessees of state trust lands within the Covered Area to inform them about the CCAA and encourage them to voluntarily participate through CIs.

b. Inform future Lessees about the CCAA at the time their leases or other grants are issued and encourage them to voluntarily participate through CIs.

(4) Assist Lessees with the development of their CIs.

(5) Work with Lessees to ensure CIs incorporate applicable conservation strategies consistent with this CCAA.

(6) Review and sign CIs.

(7) At least 30 days prior to enrolling Lessees under this CCAA, provide the completed CI to the Service for concurrence and signature.

(8) Conduct compliance monitoring activities as specified in Section 19 of this CCAA.

(9) Work with Lessees to ensure appropriate implementation of the provisions of CIs.

(10) Submit an annual report to the Service that documents activities implemented under the CCAA, their effects, and effects of activities undertaken in prior years that require multi-year monitoring, as described in Section 8.

(11) Coordinate as described in Section 4 with the implementation of the CEHMM CCA/A.

B. Service

The Service shall:

(1) Issue an Enhancement of Survival Permit (Permit) to the Commissioner, under section 10(a)(1)(A) of the ESA, in accordance with 50 CFR 17.22 and 17.32 (d), with a term of 30 years, that will provide the Commissioner with authorization for incidental take of the Covered Species and provide regulatory assurances should any of the Covered Species be listed under the ESA in the future. The Permit will also authorize incidental take of Texas hornshell mussel and other Covered Species resulting from otherwise lawful activities on the lands enrolled under CIs approved by the Commissioner and the Service. Such activities will be specified in each CI, as

applicable, and may include, but are not limited to oil, gas and mineral production and associated activities; pumping water for sale, gift, or trade; crop cultivation and harvesting; and livestock grazing.

(2) Within 30 days of receipt of a completed CI, notify the Commissioner as to whether the Service concurs that the CI is adequate to enroll the subject lands. If the Service concurs with the CI, it will sign it and return it to the Commissioner. If the Service does not concur, it will contact the Commissioner to agree on measures that would create an adequate CI for Service signature. If after 30 days the Service has not responded, concurrence is automatically conveyed.

(3) Review within 60 days those monitoring and other reports submitted by the Commissioner to the Service for compliance with the terms of the CCAA and the CIs, and notify the Commissioner of any possible amendments to the CCAA or CIs that may warrant consideration.

6. Responsibilities of Participating Lessees

Lessees that wish to receive assurances under the CCAA shall:

(1) Enroll in the CCAA by preparing a CI with the assistance of the Commissioner, to be submitted to the Service for concurrence. An approved CI will include Conservation Measures that Lessees agree to implement in order to receive protection under the Permit associated with the CCAA if any of the Covered Species is listed as threatened or endangered under the ESA.

(2) Implement the Conservation Measures as agreed upon in the CI.

(3) Notify the Commissioner or State Land Office staff with responsibility for CCAA Administration at least 15 days prior to a New Surface Disturbance, if applicable. A New Surface Disturbance is defined as the use of earth-moving equipment to alter unimproved lands enrolled in the Participant's CI, but does not include lands previously altered in compliance with the Participant's CI or prior to enrollment in this CCAA.

(4) Pay Enrollment Fees and Habitat Conservation Fees (see Section 13) if any, as agreed upon in the CI.

(5) Notify the Commissioner or State Land Office staff with responsibility for CCAA Administration in a timely manner of any problems or issues that arise in carrying out the terms of the CI.

7. Enrolled State Trust Lands and Enrolled Leases

This CCAA pertains to the approximately 79,231 acres of surface/subsurface and 8,430 subsurface state trust land within the Covered Area in New Mexico ("Enrolled State Trust Lands", see Appendix B). These lands will remain in enrolled status for the duration of this CCAA, as long as the Commissioner is performing his or her obligations under this Agreement. The Commissioner's enrollment of all state trust lands within the Covered Area shall not alter, modify, or otherwise affect rights under existing leases or grants on state trust lands, nor shall the enrollment impose new

obligations on state trust land Lessees. Similarly, Lessees shall not obtain the assurances provided by this CCAA unless they voluntarily participate in this CCAA by signing a Certificate of Inclusion in which the Participating Lessee enrolls all or a portion of its leases or grants and agrees to implement Conservation Measures. State trust lands or minerals enrolled in the CCAA through a Participating Lessee's CI shall be known as "Enrolled Leases."

8. Description of Existing Conditions

The description of existing conditions related to the Covered Species prepared for the CEHMM CCA/A is adopted herein, as follows in italics:

Species Descriptions

Texas Hornshell Mussel

The Texas hornshell (Popenaias popeii) is a freshwater mussel that historically occurred in the Pecos-Rio Grande drainage. The shell is elongate and subtrapazoidael – meaning four distinct sides with two sides that are parallel with the length greater than the width. The length-to-width ratio is 1:8. Shells are compressed and wider than tall. Beaks are low but sharp, hinge- tooth compressed, and beak cavity is very shallow. The external color varies from dark brown to olive green. The nacre is white, although some specimens show purple on the nacre. The shell length can reach 108 mm (4.25+ inches) (Howells 2001). Internal soft anatomy consists of a large visceral mass, two pairs of gills used for respiration and glochidial incubation, incurrent and excurrent siphons for water exchange, and a muscular foot for movement.

Historically, the species occurred throughout much of the Pecos and Rio Grande drainages (Carman 2007, Howells 2001). The species was once found from North Spring River, Roswell, Chaves County, NM south in the Pecos, Black, and Delaware rivers to the confluence of the Rio Grande and Pecos rivers and further to the Gulf of Mexico. Recently, there has been the discovery of individuals in the Rio Grande upriver from the confluence of the Pecos River (Howells 1994; Karateyva et al. 2015). Texas hornshell is currently known from numerous rivers that empty into the Rio Grande from the Mexican states of Coahuila, Nuevo Leon, and Tamaulipas (Carman 2007, The University of Texas at El Paso Museum Specimens). Much of the habitat within this range is no longer suitable for the Texas hornshell. Populations in the lower Rio Grande and associated tributaries are disjunct and little is known about the size of these populations. Although extant populations likely exist in Mexico, sociopolitical issues have hindered investigation into the demographics of these populations.

Currently the species is known from four widely separated locations. The first location is in the Black River where the species is confined to a 14 km (8.7 mi) stretch from Black River Village downstream to the CID Dam in Eddy County, New Mexico (Carman 2007). This represents less than 12 percent of its historic range in New Mexico (Lang 2001). The second locality is from the Lower Rio Grande in Texas, approximately from the confluence of the Pecos River and Rio Grande possibly down to Brownsville, Cameron County (Lang 2001). Howells (2001) also reported a few shells upriver from the confluence of the Pecos and Rio Grande and downstream from the eastern boundary of Big Bend National Park. Texas hornshell is also extant in the Devil's River in Texas, upstream from Amistad Reservoir (Inoue et al. 2015). Empty Texas hornshell valves (shells)

are sometimes found in locations downstream from known Occupied Habitat.[3] *Their occurrence in these downstream areas may be due to displacement from upstream populations by flooding or from river flow changes, such as water withdrawal and impoundments. Mussel shells are known to persist in the environment for long periods of time and the presence of valves should not be considered evidence of an extant population. NMDGF moved approximately 20-30 adult Texas hornshells from the Black River to the Delaware River, New Mexico, in May of 2013 (BLM 2013) and 63 individuals in the summer of 2015. NMDGF, in conjunction with the BLM, marked the individuals with tags and have been monitoring the population (BLM 2013).*

The Black River population occupies undercut riverbanks, crevices, ledges, and travertine shelves, and can be found under large boulders. Preferred substrate includes small-grained materials such as clay, silt, or sand that provides areas for the mussels to anchor. They will expose only the posterior portion of the shell in areas with a soft substrate of sand or mud, allowing the animal to siphon, with the rest of their body being covered with substrate. In rocky sites, it will be found in cracks and crevices where fine sediment deposits.

Filter-feeding mussels require clean, flowing water, making mussels good indicators of environmental change and aquatic ecosystem health. As such, both point source and non-point source pollution of surface waters can affect mussel survival. Texas hornshell is particularly sensitive to salinity, with death occurring around 7.0ppt (Lang 2001). Salinity is stable around 0.9 ppt at the Black River sites and increases to 2.8 ppt downstream of the CID Dam. The lower Pecos River downstream of the Black River confluence ranges from 6.0 – 7.0 ppt in salinity. Mean salinity of the Delaware River from 1996-2000 was 1.8 ppt (Carman 2007). New Mexico's lower Pecos River experiences high salinity due to brine intrusions near Malaga, New Mexico. Approximately 450,000 tons of salt is estimated to enter the lower Pecos at two sites every year (Miyamoto et al. 2008). Due to the extreme salinity changes and lack of passage, it is very unlikely that populations will establish outside of the already occupied reach in the Black River.

The life cycle of all freshwater mussels includes a larval stage, or glochidia. Each glochidium must attach to an external host which is most commonly a fish, although some species use salamanders. These glochidia attach to fish hosts for up to six weeks, transform into juvenile mussels, and then fall off the fish. Host fish aid in dispersal of genetics and allow for each individual to complete its life cycle. Restricting movement of host fish via dams and other barriers would restrict movement of the Texas hornshell. Without sufficient populations of host fish, a mussel population will slowly decline until it eventually cannot recover.

Several fish species have been identified as important hosts for Texas hornshell, including gray redhorse (Moxostoma congestum), river carpsucker (Carpiodes carpio), blue sucker (Cycleptus elongatus), red shiner (Cyprinella lutrensis), and longear sunfish (Lepomis megalotis). Several of these species have declined in both abundance and distribution, most likely due to the same changes in habitat that have led to range-wide declines in Texas hornshell. Conservation of host fish, specifically those mentioned above, will be critical to the success of this agreement.

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[3] defined as geomorphologically stable river channels that have a hydrologic flow regime necessary to maintain benthic habitats where the Texas Hornshell mussel is found or has been reintroduced.

Rio Grande River Cooter

The Rio Grande river cooter (Pseudemys gorzugi), also known as the Western river cooter in New Mexico, is a large turtle with yellow-green stripes on the head and neck, and red, yellow, and black markings on the legs. Females average 195.3 mm and males average 152.3 mm in carapace length (Degenhardt et al. 2005). This species is rather sedentary, with maximum movements of only 300 meters (Degenhardt et al. 2005). The Rio Grande river cooter occurs in large, deep pools of rivers, and is found in the Black, Delaware, and Pecos rivers in New Mexico and Texas (Degenhardt et al. 2005).

The Rio Grande river cooter is currently listed as "threatened" by the NMDGF, and the Center of Biological Diversity petitioned the FWS in 2012 to consider this species for protection under the ESA (NMDGF 2014). Threats to the species include recreation (such as hunting and fishing), predation, wildfires, and runoff pollution (NMDGF 2014).

Gray Redhorse

The gray redhorse (Moxostoma congestum) is a host fish for the Texas hornshell glochidia (Levine et al. 2012). Historically, the gray redhorse ranged from central and west Texas and northwestern Mexico to the Pecos River and Rio Grande in southern New Mexico and Texas (NMDGF 2014). In New Mexico, the gray redhorse historically occupied the Rio Grande downstream of Socorro and the Pecos and Black rivers from Roswell south to the Texas border (NMDGF 2014). Due to golden algae (Pyrmnesium parvum) blooms in New Mexico, the gray redhorse currently only exists in the lower Black River from Blue Springs to the Pecos River confluence (NMDGF 2014). In conjunction with the BLM, the gray redhorse has been reintroduced into the Delaware River by NMDGF. NMDGF and BLM field surveys conducted in 2016 on the Delaware River revealed initial successful reproduction by the species (BLM 2013; Tim Frey BLM pers. com.). Further augmentation of the gray redhorse may continue when deemed essential to the species persistence.

The gray redhorse occupies clear streams, and is associated with deep (>0.8 m) low current velocity (<0.1 ms-1) pools (Bean et al. 2009).

The gray redhorse was listed as "threatened" by the NMDGF in 1976 and then as "endangered" in 2008. Threats to the species include range fragmentation, contamination of surface waters, modified flow regimes, and golden algae blooms (NMDGF 2014). Depletion of surface waters is a major cause of decline of the gray redhorse (Bean et al. 2009; Hoagstrom 2001).

Blue Sucker

The blue sucker (Cycleptus elongatus) is a host fish for Texas hornshell glochidia (Levine et al. 2012). Historically, the blue sucker occupied the Pecos River north of Carlsbad downstream to the New Mexico/Texas border and the lower Black River (NMDGF 2014). The blue sucker has declined throughout much of its native range. It has further declined since 2002 in the Pecos River, in part due to the effects from golden algae blooms, from Brantley Reservoir downstream (NMDGF 2014). It is likely extirpated from the Pecos River and the status of the population in the Black River is unknown (NMDGF 2014).

The blue sucker was listed as "endangered" by the NMDGF in 1976 (NMDGF 2014). Threats to the species include range fragmentation by dams, water contamination, golden algae blooms, and water quality changes in the Black River drainage (NMDGF 2014).

Pecos Springsnail

Springsnails are tiny mollusks with conical shaped shells that range in color from gray to light brown. The Pecos springsnail (Pyrgulopsis pecosensis), which has been listed as a state "threatened" species by the NMDGF since 1983, historically occupied only Blue Springs and Castle Springs associated with the Black River in Eddy County, New Mexico. The species has since been extirpated from Castle Springs (NMDGF 2014).

Threats to the Pecos springsnail include water diversion, drought, underground pumping of water, pollution from oil and gas exploration and production, and poor range management (NMDGF 1996).

Threats

There are multiple activities in the area that may result in threats to one or all of the Covered Species. Threats to the species include water removal, disruption of flow by physical barriers, contamination, sedimentation through erosion, and removal of riparian vegetation. All Participants covered by this CCAA may not contribute to some or all of these threats, but all will follow Conservation Measures or provide in-kind services for conservation to reduce or eliminate these threats. Below is a detailed description of impacts that these threats may have on the Covered Species.

Loss, Destruction, Modification, or Fragmentation of Habitat

Water Quality and Loss of Water Resources

Degradation of water quality is a primary threat to the Covered Species and other desert riparian species. Poor water quality negatively impacts species survival and affects the function of the local ecosystem. Low water levels and contaminants (Carman 2007) exacerbate poor water quality conditions, resulting in potential damage to habitat of the Covered Species. Recent pumping of water from Black River, extreme drought events, along with other increased water withdrawals for commercial and other purposes have caused the amount of surface flow in the watershed to decline significantly (Carman 2007). Additional reduction in flow could raise the water temperature, cause pools to stagnate, and cease surface flow altogether.

Low-water crossings on both the Black and Delaware rivers are utilized frequently by both passenger vehicles and commercial trucks associated with construction activities including, but not limited to, oil and gas development. Vehicles utilizing low-water crossings could discharge pollutants (liquids or solids) (BLM 2016) in violation of the Clean Water Act or the Oil Pollution Act that could impact the Covered Species. Inadvertent transport of contaminants and contaminated soils by otherwise legal traffic usage may also occur. The topography and steep slopes of these low-water crossings could allow spilled contaminates and contaminated soils to directly enter into the surface water of the river and negatively impact the species (Boyer 1986; Green and Trett 1989; Jercinovic 1982, 1984).

Golden algae is a warm water alga that occasionally erupts (blooms) in the Pecos River (Maning and La Claire 2010). A change to the water quality has been shown to increase chances of golden algae blooms (James and De

La Cruz 1989). In contrast, high instream flows can terminate or suppress golden algae blooms (Harris 2010). These blooms originate in the Pecos River and have been found at the mouth of the Black River. By depleting the river of oxygen, blooms of golden algae and associated toxins would likely result in irreparable harm to the Covered Species. Water temperatures are lower in the Delaware River compared to other sites in the Pecos River, making it less susceptible to golden algae blooms. Maintaining adequate water flow in the Black River will help reduce the potential for golden algae blooms that can impact the Covered Species.

Runoff and Erosion

Historical land use activities, such as construction and livestock overgrazing, have decreased water absorption potential of topsoil, thus increasing erosion and runoff. Erosion and runoff are sources of fine sediment that can accumulate in a watershed, degrade or eliminate habitat for the Covered Species, and smother individual Texas hornshells. Native grasses have decreased along the riverbanks, and the vegetative component has shifted to woody plants (Carman 2007). In many cases, these activities have caused changes in stream morphology, changes in substrate composition, increases in drainage entrenchment and bank collapse, and increases in pulse discharge into the river, providing better habitat for exotic competitors (i.e., Corbicula fluminea) (NMDGF 2008).

Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Fishermen rarely target sucker species; however, both gray redhorse and blue sucker may unintentionally be collected by fishermen targeting catfish and other sport fish. Although prohibited to collect in New Mexico, the Rio Grande river cooter may be the target of illegal collection. Collection of Texas hornshell, blue sucker, gray redhorse, and Rio Grande river cooter is currently regulated by NMDGF.

Climate Change

Climate change projects indicate that warming in the Southwest is expected to be greatest in the summer (IPCC 2013, pp.11–12), and annual mean precipitation is very likely to decrease in the Southwest (IPCC 2013, pp. 11–12; Ray et al. 2008, p. 1). In Texas, the number of extreme hot days (high temperatures exceeding 95° Fahrenheit) are expected to double by around 2050 (Kinniburgh et al. 2015, p. 83). Shortages in aquifers due to increased temperatures are nearly certain (Loaiciga et al. 2000, p. 193; Mace and Wade 2008, pp. 662, 664-665; Taylor et al. 2012, p. 3), even if precipitation and groundwater recharge remain at current levels, increased groundwater pumping and resultant aquifer shortages due to increased temperatures are nearly certain. Effects of climate change, such as air temperature increases and an increase in drought frequency and intensity, have been shown to be occurring throughout the range of Texas hornshell (Kinniburgh et al. 2015, p. 88), and these effects are expected to exacerbate several of the stressors discussed above, such as water temperature and flow loss (Wuebbles et al. 2013, p. 16). In our analysis of the future condition of the Texas hornshell, we considered climate change to be an exacerbating factor in the increase of fine sediments, changes in water quality, loss of flowing water, and predation. Conservation Measures to address water quality and loss of water resources would also address the threat from climate change.

Floods

Floods occur because of heavy rainfall over land with little plant material to slow down water. Flooding can increase siltation, displace mollusks, alter habitat, and adversely impact water quality (Hastie et al. 2001).

Extensive flooding occurred along the Black River in September of 2013 and September of 2014, and both events were considered "100- year floods." Recent surveys indicate that the Texas hornshell population was not seriously affected by these floods. However, flooding can result in long-term changes to habitat, and monitoring of the Texas hornshell population should continue.

Presence of Host Fish for Texas Hornshell

Host fish are required for Texas hornshell to complete their life cycle and to allow gene flow for the maintenance of a healthy population (Levine et al. 2012). Several of these host fish species have declined in both abundance and distribution (NMDGF 2014), most likely due to the same changes in habitat that have led to range-wide declines in Texas hornshell. Further inventories for monitoring of these species along with appropriate Conservation Actions are included elsewhere within [the CEHMM] CCAA.

Competition from Exotic Species

The Asian Clam (Corbicula fluminea) is a well-established exotic in the Pecos, Black, and Delaware rivers. It competes with the Texas hornshell in space and in food resources (Sickel 1986), and exotic species, such as the Asian Clam, threaten freshwater mussel populations throughout the United States (NMDGF 2014). However, competition between the two species in the Black River has not been studied. Removal of the species by hand is the only effective technique currently known, as molluscicides are not species-specific and would negatively impact Texas hornshell populations.

Manmade Dispersal Barriers

On the Black River, the CID diversion dam, as currently constructed, and low-water crossings are physical barriers to the movements of aquatic species, such as Texas hornshell and host fish species. Physical barriers limit dispersal and gene flow of species, restricting expansion of populations. Maintenance of low-water crossings and associated roads may temporarily add sediment to the river downstream. Even without the presence of man-made barriers, high salinity in the Pecos River is a barrier to dispersal for Texas hornshell. For this reason, it is extremely unlikely that Texas hornshell could populate the Pecos River mainstem.

9. Management Zones and Minimum Flows

A. Management Zones

The Management Zones for this CCAA are as follows and as shown on the map in Appendix A:

Zone A: Occupied Habitat within the Black River and Delaware River.

Zone B: The Black and Delaware rivers (excluding Zone A in each), Blue Springs, and their associated USGS 100-year floodplain.

Zone C: Ephemeral drainages to the Black and Delaware rivers, including Owl Draw.

Zone D: The area within the CCAA boundary (Covered Area), not otherwise described in management zones A, B, or C.

B. Minimum Flows

As described in the CEHMM CCA/A, a Technical Work Group composed of subject matter experts will be convened to study the minimum flows and additional gages needed in the Black and Delaware rivers to support the Covered Species. This CCAA will adopt the minimum flow recommended by the Technical Work Group to be consistent with the CEHMM CCA/A. In the interim, a minimum flow of 9.3 cfs at the USGS gauge location at the CID dam will be used for the Black River. There is not sufficient information available to establish interim minimum flows for the Delaware River.

10. Conservation Measures

The baseline Conservation Measures that will be required of Participating Lessees are outlined below. Participants may negotiate additional Conservation Measures with the Commissioner and the Service prior to enrollment. The nexus between the Conservation Measures and threats to the Covered Species is described in Appendix C.

A. Solid Minerals Mining

Zones A, B, and C: The Commissioner does not issue leases for solid minerals mining in Zones A, B, or C.

Zone D:

1. Educate and provide direction to personnel, agents, and contractors about the Conservation Measures agreed to in the CI and this CCAA;
2. Implement erosion control measures as specified in the CI;
3. Avoid obstructing or disrupting the natural flow of ephemeral drainages;
4. Comply with the USACE Nationwide 12 General Permit, where applicable;
5. Minimize the surface disturbance where feasible;
6. Provide the Commissioner with the permit from New Mexico Energy and Natural Resources Department, Mining and Minerals Division, if applicable;
7. Provide the Commissioner with a Mine Operation Plan (MOP) and Reclamation Plan for New Surface Disturbances greater than 1 acre. The MOP shall include, but is not limited to:
    - i. Orderly development
    - ii. Locations & methods of topsoil storage
    - iii. Overburden stockpiles
    - iv. Tailings disposal
    - v. Dams or impoundments
    - vi. Slope stabilization methods
    - vii. Runoff diversions
    - viii. Solid and liquid waste disposal
    - ix. Spill reporting & cleanup
    - x. Sediment control
    - xi. Security & access control
    - xii. Blasting
    - xiii. Archaeological clearance
    - xiv. Endangered species clearances
    - xv. Comments on Plan View Map
    - xvi. List of all required federal & state permits

xvii. Professional Engineer stamp for mines greater than 10 acres

B. Agriculture and Ranching

Zone A:

1. Refrain from creating any New Surface Disturbance.
2. Follow the grazing plan as agreed upon in the CI (if applicable).
3. Curtail or cease pumping of surface water and groundwater that has a demonstrated direct hydrologic connection to Zone A when flows fall below minimum levels, as agreed upon in the CI (if applicable).
4. Implement or allow the implementation of erosion control along the banks of the Black and Delaware rivers (if applicable).
5. Implement or allow implementation of the vegetation plan as agreed upon in the CI (if applicable).

Zone B:

1. Follow the grazing plan as agreed upon in the CI (if applicable).
2. If flows in the Black or Delaware rivers drop below the minimum levels agreed upon in the CI, limit water pumping in Zone B to the minimum amount necessary for domestic and livestock use, or to prevent crop failure (if applicable).
3. Implement or allow implementation of erosion control in the 100-year floodplain.
4. Refrain from increases in current agricultural practices that could impact Zone A (e.g., increasing grazing pressure and developing new agricultural fields).
5. Implement or allow implementation of the vegetation plan as agreed upon in the CI (if applicable).

Zone C:

1. Follow the grazing plan as agreed upon in the CI (if applicable).
2. If flows in the Black or Delaware rivers drop below the minimum levels agreed upon in the CI, limit water pumping in Zone C to the minimum amount necessary for domestic and livestock use, or to prevent crop failure (if applicable).
3. Implement or allow implementation of the vegetation plan as agreed upon in the CI (if applicable).

Zone D:

1. Follow the grazing plan as agreed upon in the CI (if applicable).
2. Implement or allow implementation of the vegetation plan as agreed upon in the CI (if applicable).

C. Pumping Water for Sale, Gift, or Trade

Zones A, B, and C: Curtail or cease pumping of surface water and groundwater that has a demonstrated direct hydrologic connection to Zone A when flows fall below minimum levels, per the specific measures agreed upon in the Participant's CI.

D. Oil and Gas and Associated Infrastructure

Zone A: No New Surface Disturbance in Occupied Habitat within the Black River and Delaware River.

Zone B: The Participant will exercise good faith efforts to avoid Zone B. Where the Participant cannot avoid Zone B, this CCAA and its associated CI authorizes New Surface Disturbance subject to the following and the provisions of Section 10(E):

1. Participants shall also have the option of submitting a reason that Zone B cannot be avoided for any of their initially enrolled parcels that have acreage in Zone B at the time their CI is being prepared or when parcel enrollments are updated. The deadlines for the Commissioner's response and appeal to the Executive Committee, if any, are the same as provided in Section 10(E) for a proposed New Surface Disturbance or seismic activity in Zone B. If the Commissioner concurs that Zone B cannot reasonably be avoided for a given parcel, the CI shall incorporate such concurrence, or in the case of parcels that are added later, the CI shall be amended to include such concurrence. This option provides Participants with greater certainty and advance information about whether a New Surface Disturbance or seismic activity will be allowed in Zone B for their Enrolled Leases that contain acreage in Zone B.
2. If the Participant did not already obtain the Commissioner's concurrence authorizing New Surface Disturbance or seismic activities in Zone B for an Enrolled Lease during initial enrollment or when updating Enrolled Leases, no less than fifteen (15) days prior to commencing a New Surface Disturbance or seismic activities in Zone B, the oil and gas Participant shall identify and submit to the Commissioner a reason that Zone B cannot be avoided. Reasons may include:
    i. The mineral estate cannot otherwise be accessed;
    ii. The Participant lacks surface or right-of-way access;
    iii. Contractual or landowner restrictions;
    iv. The mineral resource cannot be accessed utilizing proven technology reasonably available in the Permian Basin;
    v. Environmental impacts would be increased by avoiding Zone B;
    vi. Safety considerations;
    vii. The project would become economically infeasible; or,
    viii. Other reasons, as approved by the Commissioner in conjunction with the Service.
3. If the Commissioner concurs that Zone B cannot reasonably be avoided (see Section 10(E)), the oil and gas Participant shall take the following steps to minimize the potential impacts:
    i. Implement erosion control measures in accordance with the most current version of the Reasonable and Prudent Practices for Stabilization of Oil and Natural Gas Construction Sites (RAPPS);
    ii. Comply with Spill Prevention, Control, and Countermeasure (SPCC) requirements in accordance with 40 CFR Part 112;
    iii. Comply with the United States Army Corp of Engineers (USACE) Nationwide 12 General Permit, where applicable;
    iv. Educate personnel, agents, and contractors about the requirements of the CI and this CCAA and provide direction in accordance with the Conservation Measures;
    v. Provide the Commissioner a copy of the permit from New Mexico Oil Conservation Division (NMOCD), if applicable; and,
    vi. Provide the Commissioner plats or other electronic media describing the New Surface Disturbance and exiting surface disturbance utilized for the Project.

Zone C: The oil and gas Participant will exercise good faith efforts to avoid obstructing or disrupting the natural flow of ephemeral drainages. If it is not feasible to avoid these areas, the Participant shall take the following steps to minimize the potential impacts:

1. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS);
2. Comply with SPCC requirements in accordance with 40 CFR Part 112;
3. Educate personnel, agents and contractors about the requirements of the CI and this CCAA and provide direction in accordance with the Conservation Measures;
4. Comply with the USACE Nationwide 12 General Permit, where applicable;
5. Provide the Commissioner with a copy of the permit from NMOCD, if applicable; and,
6. Provide the Commissioner plats or other electronic media describing the New Surface Disturbance for the Project.

Zone D:

1. Comply with SPCC requirements in accordance with 40 CFR Part 112;
2. If requested by the Commissioner, provide SPCC plans for Participant's New Surface Disturbance of Enrolled Properties subject to the participant's CI;
3. Provide the Commissioner with a copy of the permit from NMOCD, if applicable; and
4. Provide the Commissioner plats or other electronic media describing the New Surface Disturbance for the Project.

E. All Participating Lessees

Exotic or Invasive Species

With the exception of agricultural or livestock species, Participating Lessees shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area.

Notification of New Surface Disturbance Requirements for All Zones:

No less than 15 days prior to commencing a New Surface Disturbance or seismic activities, the Participant shall:

1. Consult with the Commissioner to assess the potential impacts to the Covered Species and their habitat. Upon request from the Participant, the Commissioner shall make recommendations to reduce potential impacts to the Covered Species and their habitat and to reduce potential fees for New Surface Disturbance activities proposed within the Covered Area.
2. Provide the Commissioner with a description of the proposed New Surface Disturbance that includes:
   i. Survey plats, GIS shapefiles, Google Earth KML, or other appropriate documentation of proposed surface disturbing activities within the Covered Area;
   ii. Anticipated timeframe that surface disturbing activities would occur;

3. Provide the Commissioner additional notice not less than 3 days prior to commencement of New Surface Disturbance for initial project development; and,
4. Provide the Commissioner notice not less than 3 days in advance of any changes to prior notice of New Surface Disturbance.

The Commissioner, in cooperation with the Participant, will complete the following:

1. Review the description of the New Surface Disturbance or seismic activity submittal by Participants to determine if it is complete;
2. Conduct onsite inspections of the projects if necessary;
3. Calculate Habitat Conservation Fees for the proposed New Surface Disturbances and notify CEHMM so the amount can be deducted from the Participant's account.
4. For a proposed New Surface Disturbance in Zone B, if the Participant did not already obtain the Commissioner's concurrence authorizing New Surface Disturbance or seismic activities in Zone B of the Enrolled Lease during initial enrollment or when updating Enrolled Leases:
    a. The Commissioner shall assess the potential impacts and the reasons provided for why Zone B cannot be avoided. The Commissioner shall respond to the Participant in writing within ten (10) days of receiving the Participant's notice of proposed New Surface Disturbance in Zone B. The response shall indicate that the Commissioner concurs that Zone B cannot be avoided, or if the Commissioner does not concur, shall suggest a reasonable alternative to reduce the impact of or avoid a New Surface Disturbance in Zone B.
    b. If the Commissioner does not concur that Zone B cannot be avoided and the Participant does not agree to the suggestions to reduce the impact of or avoid a New Surface Disturbance in Zone B, the Participant may work with SLO staff to develop a mutually acceptable solution. The Participant may also, at any time after receiving notice of non-concurrence, submit a request for Executive Committee review to the Commissioner by email, fax, U.S. mail, or in person. The Executive Committee shall review the Participant's reasons for why Zone B cannot be avoided and why the suggestions provided are not practicable, and make a final determination within ten (10) days of the Commissioner's receipt of the Participant's request for Executive Committee review. Within three (3) days of making a final determination, the Executive Committee shall notify the Lessee of its decision by email and U.S. mail with proof of delivery.
    c. Any New Surface Disturbance in Zone B that is implemented without written concurrence by the Commissioner that Zone B cannot be avoided or final determination by the SLO Executive Committee that the New Surface Disturbance in Zone B can proceed, shall not be a Covered Activity under this CCAA.

11. Expected Benefits

As identified in the FWS' Candidate Conservation Agreement with Assurances Revised Policy (81 FR 95164), and regulations at 50 CFR 17.22, to enter into a CCAA and issue a permit and assurances, the Service must determine that "the implementation of the terms of the CCAA is

reasonably expected to provide a net conservation benefit to the affected covered species included in the permit . . ." Consistent with the CCAA policy, meeting the CCAA standard does not depend on the number of acres enrolled, and adoption of the CCAA and enrollment of landowners does not guarantee that listing will not be necessary. The Service has determined that this CCAA meets the standard specified in the CCAA policy and regulations.

Conservation benefits for the Covered Species from implementation of the CCAA will accrue from the protection and improvement of habitat through Lessees' Conservation Measures, and by the Commissioner's authorization for implementation of Conservation Projects on state trust lands using funds contributed by Participating Lessees. State trust land beneficiaries will benefit from improvements in land stewardship and assurances that revenue-generating activities remain viable. Participating Lessees on state trust lands will benefit from the assurances that they will not incur additional land use restrictions if any of the Covered Species are listed under the ESA in the future.

12. Certificates of Inclusion

Prior to the effective date of listing of any of the Covered Species, all Lessees on state trust lands within the Covered Area are eligible to participate in the CCAA by voluntarily agreeing to implement Conservation Measures and signing a CI. Lessees must hold their own CI specific to their Covered Activities to receive assurances. If a parcel is enrolled into a CI by a Lessee prior to the listing of any of the Covered Species, subsequent Lessees will have the option of receiving the assurances under the CCAA by signing a new CI. A standard template for CIs can be found in Appendix D.

13. Enrollment Process and Fee Structure

Each Participating Lessee will confer with the Commissioner to determine whether to enroll all of the Participant's activities and facilities on state trust lands and minerals within the Covered Area (All Activities Enrollment) or to enroll specific parcels of lands, including leases or portions of leases, within the Covered Area (Parcel-by-Parcel Enrollment), and to determine whether the Participant wishes to include additional Conservation Measures in the CI.

This CCAA will adopt the Enrollment Fees and Habitat Conservation Fees that were negotiated between CEHMM and representatives of the Oil and Gas and Associated Infrastructure industry group to provide a source of funding for CCAA Administration by CEHMM and for Conservation Projects (as defined in Section 4 of this CCAA). Enrollment Fees are paid annually for the first three years of enrollment in the CCAA. Habitat Conservation Fees are paid when a Participant's activities result in a New Surface Disturbance or seismic activity. Habitat Conservation Fees are deducted from a Participant's Enrollment Fee account when the Participant notifies SLO and CEHMM of a proposed New Surface Disturbance or seismic activity. When the funds in the Participant's Enrollment Fee account have been expended for that Participant's Habitat Conservation fees, the Participant must contribute additional Habitat Conservation fees to cover any New Surface Disturbances.

If Enrollment Fees and Habitat Conservation Fees are required, the fees will be paid directly to CEHMM for administration pursuant to the MOA between the Commissioner and CEHMM. Lessees enrolling in the Land Office CCAA that are also participating in the CEHMM CCA/A will not be required to pay additional fees to participate in this CCAA. The enrollment process and fee structure can be found in Appendix E.

Rather than paying Habitat Conservation Fees, the Participant may elect to instead contribute in-kind services, including but not limited to the following:

(1) Revegetation along rivers with native vegetation with Service and Commissioner approval;
(2) Bank stabilization along rivers, i.e., plant willows, fence off river, etc. with native vegetation with FWS and CEHMM approval;
(3) Land acquisition;
(4) Water quality monitoring;
(5) Installing fences along river corridors;
(6) Water right acquisition or use of water right to benefit the Covered Species;
(7) Abandon or move points of diversion outside the zone of influence of the river;
(8) Contract partners for research design and activities;
(9) Erosion control measures;
(10) Brush control;
(11) Woody, invasive control;
(12) Native seed bank;
(13) Controlled burns;
(14) Sponsor translocation of Covered Species;
(15) Removal and/or remediation of oil and gas facilities including, but not limited to, roads, pads, pits, pipelines, right-of-ways, and other related facilities or development;
(16) Improve road crossings; and
(17) Data collection.

The Commissioner will work with Participating Lessees that wish to provide in-kind services to define, value, and obtain Service approval of the proposed in-kind services. The Participant must contact the Commissioner with proposed in-kind services, and the Commissioner, in conjunction with the Service, must approve those services prior to services being performed. The Commissioner shall coordinate with CEHMM and the Implementation Committee for the CEHMM CCA/A to ensure that any in-kind services are valued consistently with other in-kind services performed under the CEHMM CCA/A.

14. Covered Activities

This CCAA provides assurances to the Land Office for activities related to carrying out its constitutional mandate to generate revenues for trust beneficiaries, including all activities associated with agricultural leasing, oil, gas and minerals leasing, and commercial leasing; grants of easements or rights-of way; site remediation and restoration; removal of infrastructure; and Conservation Projects.

Conservation, research and monitoring projects performed or approved by the Commissioner will also be Covered Activities. Projects may include, but are not limited to, mark/recapture studies, presence/absence surveys, captive breeding and reintroduction, population surveys, habitat assessments, water quality monitoring, and other similar activities to study, monitor, and assess the species.

Participants receive assurances for their lawful activities conducted on state trust lands to effectuate the purposes of their leases or grants, including but not limited to activities associated with oil and gas development; ranching, farming, or other agriculture; sale, gift or trade of water; and mining and solid mineral extraction. A description of these Covered Activities is found in Appendix F.

15. Level/Type of Take/Impacts

Specific authorization of incidental take is provided as part of the enhancement of survival permit issued by the Service in conjunction with this CCAA. Should any of the Covered Species become listed under the Act, authorization for incidental take under the permit is limited to the Covered Activities of the Land Office and Participating Lessees. Incidental take could occur as a result of many Covered Activities, but the level of incidental take is very difficult to quantify or, in many cases, to attribute to a particular activity. Nevertheless, the Conservation Measures and Conservation Projects that will be implemented under this CCAA are expected to avoid and minimize incidental take by eliminating or discouraging certain activities in and near habitats for the Covered Species, and by reducing erosion and sedimentation, slowing runoff, stabilizing streambanks, ensuring minimum flows, and otherwise protecting or restoring habitat.

16. Assurances Provided

Through this CCAA, the Service provides assurances to the Land Office and Participating Lessees that no additional conservation measures or additional land, water, or resource use restrictions, beyond those voluntarily agreed to and described in this CCAA or associated CI, will be required should one or more of the Covered Species become listed as a threatened or endangered species in the future, so long as the CCAA and CIs are properly implemented. These assurances will be authorized with the issuance of an enhancement of survival permit under section 10(a)(1)(A) of the ESA, which will become effective if one or more of the Covered Species is listed in the future. The Permit, when it becomes effective, will also authorize the incidental take of the species by the Commissioner and Participating Lessees, as long as the take is consistent with the terms of this CCAA and relevant CI.

17. Assurances Provided to Land Office and Participating Lessees in Case of Changed or Unforeseen Circumstances

A. Changed Circumstances

"Changed circumstances" are those alterations in circumstances that can reasonably be anticipated and planned for in the CCAA. Low flow in the occupied reach of the Black River or Delaware River due to drought or water extraction is an example of a changed circumstance.

Changed circumstances provided for in the CCAA

If additional conservation measures are necessary to respond to changed circumstances and the measures were set forth in the CCAA or CI, the Commissioner or Participating Lessee will implement the measures specified in the CCAA or CI.

Changed circumstances not provided for in the CCAA

If additional conservation measures not provided for in the CCAAs operating conservation program are necessary to respond to changed circumstances, the Service will not require any conservation measures in addition to those provided for in the CCAA without the consent of the Commissioner or Participating Lessee, provided the CCAA or CI is being properly implemented.

B. Unforeseen Circumstances

"Unforeseen circumstances" are changes in circumstances that could not reasonably have been anticipated by the Commissioner and FWS at the time of the CCAAs negotiation and development, and result in a substantial and adverse change in the status of the species. If additional conservation measures are necessary to respond to unforeseen circumstances, the Service may require additional measures of the Commissioner or Participating Lessee where the CCAA and CI is being properly implemented, but only if such measures are limited to modifications within the CCAAs conservation strategy for the affected species, and only if those measures maintain the original terms of the CCAA to the maximum extent possible. Additional conservation measures will not involve the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources available for development or use under the original terms of the CCAA and CI without the consent of the Commissioner or Participating Lessee.

The Service will have the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the affected species. The Service will consider, but not be limited to, the following factors:

(1) Size of the current range of the affected species;
(2) Percentage of range adversely affected by the CCAA;
(3) Percentage of range conserved by the CCAA;
(4) Ecological significance of that portion of the range affected by the CCAA;
(5) Level of knowledge about the affected species and the degree of specificity of the species' conservation program under the CCAA; and

(6) Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

18. Measuring and Reporting

The Commissioner shall monitor and measure the effectiveness of Conservation Projects on state trust lands. Specific monitoring requirements and measurement criteria shall be included as part of the overall work scope of the Conservation Project to ensure that any needed baseline data are gathered prior to Conservation Project implementation. The Commissioner shall also document the Conservation Measures or in-kind services performed by Participating Lessees for the benefit of the Covered Species.

The Commissioner will be responsible for annual monitoring and reporting for state trust lands enrolled in this CCAA. Pursuant to the terms of their MOA, the Commissioner and CEHMM will jointly prepare and submit a combined annual report to the Service by March 1 of each year. Participating Lessees will not be required to submit any additional information for this report. This CCAA adopts the monitoring and reporting guidelines developed for the CEHMM CCA/A, to include the following information:

(1) Participants enrolled under the CCAA over the past year, including copies of the completed CI;
(2) Activities conducted by the Participants and how impacts to the Covered Species were minimized;
(3) Habitat management and habitat conditions in the Covered Area and on all Enrolled Properties over the past year;
(4) Effectiveness of Conservation Projects implemented in previous years at meeting the intended conservation benefits;
(5) Results of monitoring, including population surveys and studies, over the past year;
(6) Any mortality or injury of the Covered Species that was observed over the year;
(7) Funds used for habitat conservation on state trust lands, including how they were used and how much are remaining; and
(8) Captive-reared or translocated Texas hornshells or other included Covered Species that were released on Enrolled Leases.

19. Compliance Monitoring

The Commissioner shall be responsible for monitoring and reporting specified herein related to implementation of the CCAA and fulfillment of its provisions, including implementation of agreed-upon Conservation Measures, and take authorized by the permit. The Commissioner shall make contact with and, after reasonable prior notice to the Participating Lessee, conduct a site visit for Participating Lessees at least once per year for purposes of monitoring compliance with the terms of the Lessee's CI. The Service, after reasonable prior notice to the Land Office and Participating Lessee, may also enter the enrolled lands to ascertain compliance with the CCAA. The

Commissioner shall notify the Service if a Participant has been issued a Conservation Measure Violation.

If the Commissioner or the Service determines that a Participating Lessee is failing to implement the Conservation Measures agreed to in the CI, the Commissioner shall notify the Participant by mail and email of the nature of the violation and the corrective actions that are required. The Participant shall complete corrective actions within sixty days of receipt of the first notification, or, within fifteen days of receipt of the first notification, provide an explanation for why corrective actions cannot be completed within sixty days and an anticipated completion date. If corrective actions have not been completed within sixty days of receipt of the first notice or by a date agreed to by the Commissioner, the Commissioner shall provide a second notice of violation to the Participant by mail and email. If the Participant has not completed corrective actions within thirty days of receipt of the second notice, the Commissioner may issue the Participating Lessee a Conservation Measure Violation (CMV) by email and U.S. mail with proof of delivery.

A Participant that receives a notice of violation or CMV can request Executive Committee review by notifying the Commissioner by email, fax, U.S. mail, or in person within 30 days of receipt of any notice or CMV. The Executive Committee shall review the facts surrounding the issuance of the CMV and determine the outcome within 60 days of receiving the request for review from the Participant, and will notify the Participant of the outcome by email and U.S. mail with proof of delivery within 10 days of a determination.

In the case of Participant noncompliance with Conservation Measures that presents and immediate or severe threat to any of the Covered Species, the Commissioner shall request the Participating Lessee to correct the noncompliance immediately or within a specified period of time that is reasonable under the circumstances. Failure of the Participating Lessee to correct the noncompliance within the specified time will be deemed an unresolved CMV, subject to the Executive Committee review process described above.

A Participant's noncompliance that arises out of a single event or activity in one location and that affects more than one candidate conservation agreement for the Covered Species (i.e., any combination of the SLO CCAA, CEHMM CCAA, and CEHMM CCA) shall not be counted as a separate deficiency or CMV under each affected candidate conservation agreement. In such cases involving state trust land, the Commissioner and CEHMM will confer to determine whether one or both Parties will work with the Participant to address the violation. If a Participant acquires a total of three unresolved CMVs under any of the candidate conservation agreements for the Covered Species (i.e., SLO CCAA, CEHMM CCAA, or CEHMM CCA) in which the Participant is enrolled, the Commissioner may take actions, up to and including termination of some or all of the Participant's CI. Termination of all or a portion of a CI by the Commissioner shall constitute an agency determination as defined in Section 19.2.15.7.A. NMAC.

20. Biological Monitoring

The Land Office shall grant a right of access permit to the Service or New Mexico Department of Game and Fish for the purpose of biological monitoring of the Covered Species. The Commissioner has discretion to grant a right of access permit to other entities such as universities or conservation organizations for the purpose of conducting monitoring or scientific research related to the Covered Species. Requests for such permits shall not be unreasonably denied.

21. Notification of Take Requirement

By signature of this CCAA and any associated CIs, the Land Office shall notify the Service of any emergencies or unexpected circumstances that could result in, or has resulted in, an incidental take. The Land Office shall notify the Service of such emergencies or circumstances as soon as the Land Office becomes aware of them.

22. Duration of CCAA and Permit

The CCAA, including any commitments related to funding under Service programs, will be in effect for 30 years following its approval and signing by the Parties. The section 10(a)(1)(A) permit authorizing take of the species will become effective on the date of the final rule listing a species and will expire when this CCAA expires or is otherwise suspended or terminated. The permit and CCAA may be extended beyond the specified terms prior to permit expiration through the permit renewal process and with agreement of the Parties.

23. Modification of Requirements

After approval of the CCAA, the Service may not impose any new requirements or conditions on, or modify any existing requirements or conditions applicable to, the Commissioner or a Participating Lessee or successor in interest to the Commissioner or a Participating Lessee, to compensate for changes in the conditions or circumstances of any species or ecosystem, natural community, or habitat covered by the CCAA except as stipulated in 50 CFR 17.22(d)(5) and 17.32(d)(5).

24. Modification of the CCAA

Any Party may propose modifications or amendments to this CCAA by providing written notice to, and obtaining the written concurrence of, the other Party. Such notice shall include a statement of the proposed modification, the reason for it, and its expected results. The Party providing written notice of proposed modifications or amendments must forward copies to all Participants electronically, if the email address is known, or by U.S. mail. The Parties will use their best efforts to respond to proposed modifications within 60 days of receipt of such notice. Proposed modifications will become effective upon the other Party's written concurrence.

25. Amendment of the Permit

The permit may be amended to accommodate changed circumstances in accordance with all applicable legal requirements, including but not limited to the Endangered Species Act, the National

Environmental Policy Act, and the Service's permit regulations at 50 CFR 13 and 50 CFR 17. The party proposing the amendment shall provide a statement describing the proposed amendment and the reasons for it.

26. Termination of the CCAA

The Commissioner may, for good cause, terminate implementation of the CCAAs voluntary management actions prior to the CCAAs expiration date, even if the expected benefits have not been realized. If the CCAA is terminated without good cause, however, the Commissioner shall surrender the enhancement of survival permit at termination, thus relinquishing the permit's take authority (if a Covered Species has become listed) and the assurances granted by the permit and assurances granted to Participants in their CIs. The Commissioner shall give 60 days' written notice to the Service and Participating Lessees of its intent to terminate the CCAA. Upon such notice, the Service will provide Participating Lessees the opportunity to transfer their enrollment to a successor to the SLO CAAA or, if no successor, to the CEHMM CCAA, by executing a new CI or amending an existing CI. In the event that enrollment is transferred to a successor to the SLO CCAA or to CEHMM, previously enrolled Participants shall not be required to pay new enrollment fees, and any remaining funds in or balances due on the Participants' accounts shall be carried over to the Participating Lessee's new enrollment. The Commissioner shall give the Service an opportunity to relocate affected species within 90 days of the notice.

27. Permit Suspension or Revocation

The Service may suspend or revoke the permit for cause in accordance with the laws and regulations in force at the time of such suspension or revocation (50 CFR 13.28(a)). The Service may also, as a last resort, revoke the permit if continuation of permitted activities would likely result in jeopardy to covered species (50 CFR 17.22/32(d)(7)). The Service will revoke because of jeopardy concerns only after first implementing all practicable measures to remedy the situation.

28. Remedies

Each Party shall have all remedies otherwise available to enforce the terms of the CCAA and the permit. No Party shall be liable in damages for any breach of this CCAA, any performance or failure to perform an obligation under this CCAA, or any other cause of action arising from this CCAA.

29. Dispute Resolution

The Parties agree to work together in good faith to resolve any disputes, using dispute resolution procedures agreed upon by all Parties.

30. Succession and Transfer

This CCAA shall be binding on and shall inure to the benefit of the Parties and their respective successors and transferees in accordance with applicable regulations (50 CFR 13.24 and 13.25). The rights and obligations under this CCAA shall run with the ownership of the Enrolled State Trust

Lands and are transferable to subsequent non-Federal property owners pursuant to 50 CFR 13.25. The enhancement of survival permit issued to the Land Office is also transferable to the new owner(s) pursuant to 50 CFR 13.25. If the CCAA and permit are transferred, the new owner(s) will have the same rights and obligations with respect to the Enrolled State Trust Lands as the Commissioner. The new owner(s) also will have the option of receiving CCAA assurances by signing a new CCAA and receiving a new permit. The Commissioner shall notify the Service in writing of any transfer of ownership, so that the Service can attempt to contact the new owner, explain the baseline responsibilities applicable to the property, and seek to interest the new owner in signing the existing CCAA or a new one to benefit listed species on the property. Assignment or transfer of the permit shall be governed by Service regulations in force at the time.

31. Availability of Funds

Implementation of this CCAA is subject to the requirements of the Anti-Deficiency Act and the availability of appropriated funds. Nothing in this CCAA will be construed by the Parties to require the obligation, appropriation, or expenditure of any funds from the U.S. Treasury. The Parties acknowledge that the Service will not be required under this CCAA to expend any Federal agency's appropriated funds unless and until an authorized official of that agency affirmatively acts to commit to such expenditures as evidenced in writing.

Implementation of this CCAA is also contingent upon sufficient appropriations and authorization being made by the New Mexico Legislature for the Land Office's performance of its obligations under the CCAA.

32. No Third-Party Beneficiaries

This CCAA does not create any new right or interest in any member of the public as a third-party beneficiary, nor shall it authorize anyone not a party to this CCAA to maintain a suit for personal injuries or damages pursuant to the provisions of this CCAA. The duties, obligations, and responsibilities of the Parties to this CCAA with respect to third parties shall remain as imposed under existing law.

33. Indemnification and Warranties

The Land Office and Service acknowledge that their liabilities are limited by the New Mexico Tort Claims Act (§41-4-1 et seq. NMSA 1978) and the federal Tort Claims Act (28 U.S.C. §1402 et seq.), respectively. To the extent permitted under their respective tort claims acts, the Land Office and Service agree to be responsible for the acts and omissions of their agency, employees, agents and contractors. Each party shall, at their own cost and expense, obtain and maintain insurance of the type and amounts required by their respective tort claims, risk management or loss prevention rules or policies to protect their operations, property, employees and agents for all activities under this CCAA.

34. Notices and Reports

Any notices and reports, including monitoring and annual reports, required by this CCAA shall be delivered to the persons listed below, as appropriate:

Laura Riley, Deputy Commissioner
New Mexico State Land Office
310 Old Santa Fe Trail
PO Box 1148
Santa Fe, NM 87504-1148

Debra Hill
New Mexico Energy Streamlining Program Coordinator
Southwest Regional Office
U.S. Fish and Wildlife Service
2105 Osuna NE
Albuquerque, NM 87113

IN WITNESS, WHEREOF, THE PARTIES HERETO have, as of the last signature below, executed this CCAA to be in effect as of the date of the last signature. The CCAA may be executed in one or more counterparts, all of which shall be considered an original.

Edward D. Koch

Assistant Regional Director-Ecological Services
U.S. Fish and Wildlife Service

10/13/17
Date

(Commissioner's signature follows on next page)

Commissioner of Public Lands
New Mexico State Land Office

10-4-17
Date

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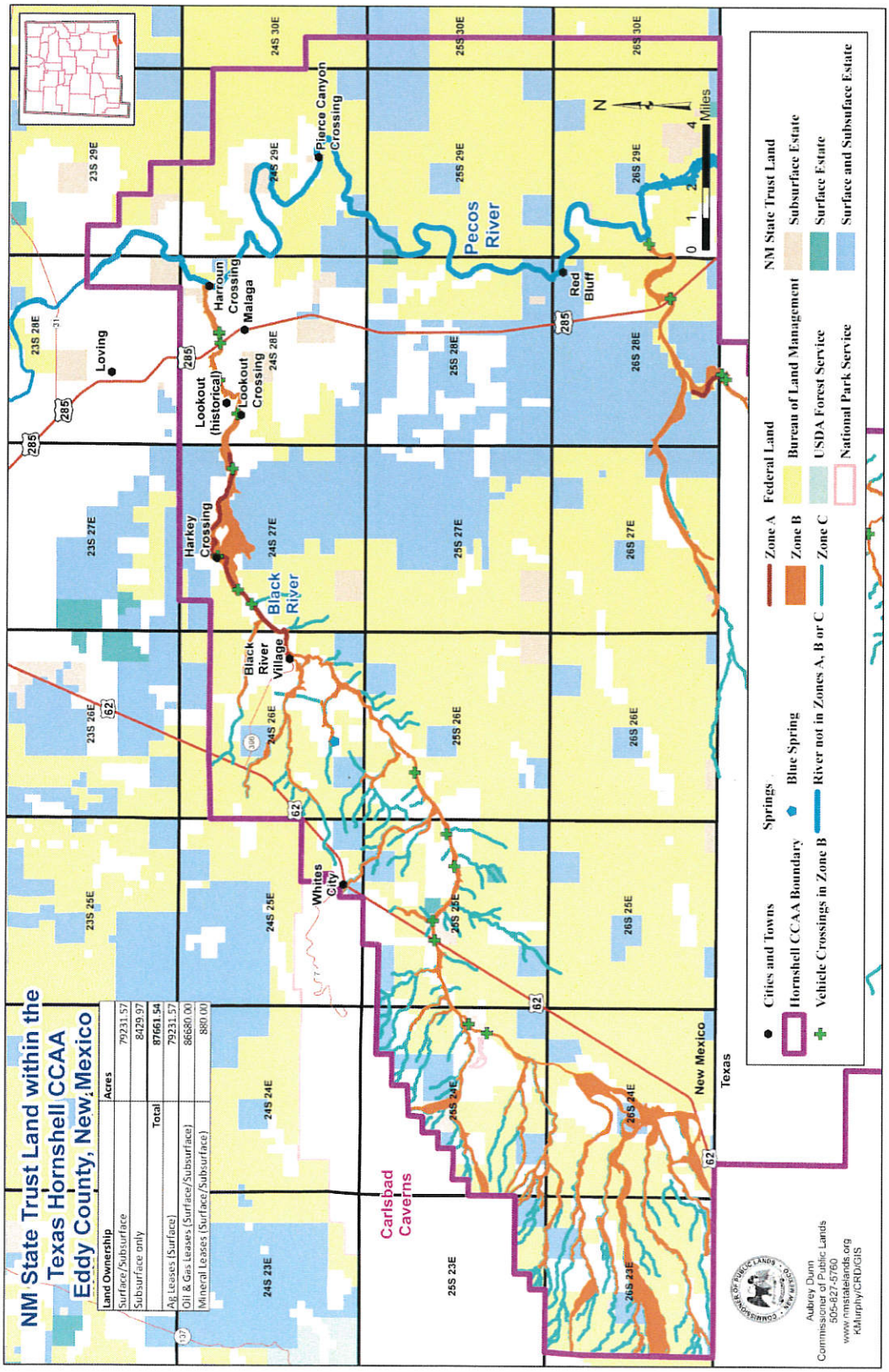
35. Appendices

Appendix A: Map of Management Zones and Covered Area



Appendix B: Description of Enrolled State Trust Lands

Surface and Subsurface Estate:

TWP	RGE	Section	Description	Acreage (+/-)
24S	25E	34	SE4	160.00
24S	25E	36	ALL	640.00
24S	26E	16	ALL	640.00
24S	26E	32	ALL, private parcel removed	609.25
24S	26E	36	ALL	640.00
24S	27E	1	ALL (includes Lots 1, 2, 3, 4)	640.64
24S	27E	2	ALL (includes Lots 1, 2, 3, 4)	641.44
24S	27E	3	N2 (includes Lots 1, 2, 3, 4), N2S2, SWSE, SESE	561.66
24S	27E	4	N2 (includes Lots 1, 2, 3, 4), NWSE, NESE	401.60
24S	27E	5	S2, S2N2,	480.00
24S	27E	9	SE4	160.00
24S	27E	10	S2S2, NWSE, NESE	240.00
24S	27E	11	S2S2, NWSW	200.00
24S	27E	12	N2N2, SWNW, SENW, SENE	280.00
24S	27E	13	SW4, SWNW	200.00
24S	27E	14	ALL	640.00
24S	27E	15	ALL	640.00
24S	27E	16	ALL	640.00
24S	27E	21	E2	320.00
24S	27E	22	ALL	640.00
24S	27E	23	ALL	640.00
24S	27E	24	W2, SE4	480.00
24S	27E	25	W2	320.00
24S	27E	26	ALL	640.00
24S	27E	27	ALL	640.00
24S	27E	28	SE4	160.00
24S	27E	34	ALL	640.00
24S	27E	35	ALL	640.00
24S	27E	36	ALL	640.00
24S	28E	12	NE4	160.00
24S	28E	23	SWSW	40.00
24S	28E	25	SE4	160.00
24S	28E	26	NWNW, SWNW, SENW	120.00
24S	28E	31	ALL (includes Lots 1, 2, 3, 4)	642.78
24S	28E	32	W2W2, NENW, SESW, SWSE, SESE, NESE	360.00
24S	28E	36	ALL	640.00
24S	29E	30	S2 (includes Lots 3, 4)	319.00
24S	29E	31	ALL (includes Lots 1, 2, 3, 4)	637.28
24S	29E	32	ALL (includes Lots 1, 2, 3, 4)	400.00
24S	29E	36	ALL	640.00

25S	23E	36	ALL	640.00
25S	24E	1	S2 (includes L5, 6, 7, 8)	328.80
25S	24E	2	SE4	160.00
25S	24E	11	E2	320.00
25S	24E	14	W2 (includes Lots 1, 2, 3, 4)	328.70
25S	24E	15	ALL	640.00
25S	24E	17	SE4	160.00
25S	24E	32	ALL	640.00
25S	24E	36	ALL	640.00
25S	25E	2	ALL (includes Lots 1, 2, 3, 4)	640.56
25S	25E	5	S2	320.00
25S	25E	6	N2S2, SWSE, SESE	239.80
25S	25E	15	NW4 (includes L1, 2, 3, 4)	172.20
25S	25E	26	NW4	160.00
25S	25E	32	ALL	640.00
25S	25E	36	ALL	640.00
25S	26E	2	ALL (includes Lots 1, 2, 3, 4)	640.32
25S	26E	16	ALL	640.00
25S	26E	32	S2, SENE	360.00
25S	26E	32	NWNW, NWNW	80.00
25S	27E	1	N2 (includes Lots 1, 2, 3, 4), SW4, NWSE, SWSE	559.20
25S	27E	2	ALL (includes Lots 1, 2, 3, 4)	637.80
25S	27E	3	ALL (includes Lots 1, 2, 3, 4)	636.92
25S	27E	9	ALL	640.00
25S	27E	10	ALL	640.00
25S	27E	11	ALL	640.00
25S	27E	12	SENE	40.00
25S	27E	12	W2	320.00
25S	27E	13	S2, W2NW4, NENW	440.00
25S	27E	14	ALL	640.00
25S	27E	15	ALL	640.00
25S	27E	16	ALL	640.00
25S	27E	21	S2	160.00
25S	27E	21	NENE, SWNE, SENE	120.00
25S	27E	22	ALL	640.00
25S	27E	23	ALL	640.00
25S	27E	24	N2	320.00
25S	27E	25	ALL	640.00
25S	27E	26	NWSE, NESE, SESE	120.00
25S	27E	26	NENW, SENW	80.00
25S	27E	36	ALL	640.00
25S	28E	1	E2E2 (includes Lot 1)	161.16
25S	28E	2	SE4	160.00
25S	28E	3	ALL (includes Lots 1, 2, 3, 4)	641.76

25S	28E	4	ALL (includes Lots 1, 2, 3, 4)	641.76
25S	28E	5	N2 (includes Lots 1, 2, 3, 4), SE4	481.98
25S	28E	7	E2, NW4 (includes Lots 1, 2), Lot 3	521.70
25S	28E	10	SESE	40.00
25S	28E	10	NWSW, SWSW, SESW	120.00
25S	28E	10	N2NE4	80.00
25S	28E	15	SESE	40.00
25S	28E	15	SW4	160.00
25S	28E	15	E2NE4	80.00
25S	28E	16	ALL	640.00
25S	28E	17	E2E2, N2NW4, NWNE, W2SE4	360.00
25S	28E	18	SW4 (includes Lots 3, 4)	160.53
25S	28E	18	NE4	160.00
25S	28E	19	N2 (includes Lots 1, 2), SE4	480.56
25S	28E	20	W2SW4	80.00
25S	28E	20	NE4	160.00
25S	28E	21	N2N2	160.00
25S	28E	22	E2	320.00
25S	28E	27	S2, NE4	480.00
25S	28E	28	W2, SE4	480.00
25S	28E	29	S2, W2NW4	400.00
25S	28E	30	S2 (includes Lots 3, 4)	320.68
25S	28E	31	ALL (includes Lots 1, 2, 3, 4)	640.64
25S	28E	32	W2W2	160.00
25S	28E	32	E2	320.00
25S	28E	33	ALL	640.00
25S	28E	34	ALL	640.00
25S	28E	35	ALL except SWNE, NWSE	560.00
25S	28E	36	ALL	640.00
25S	29E	1	ALL (includes Lots 1, 2, 3, 4)	639.84
25S	29E	2	ALL (includes Lots 1, 2, 3, 4)	639.04
25S	29E	6	ALL (includes Lots 1, 2, 3, 4, 5, 6, 7)	636.24
25S	29E	11	ALL	640.00
25S	29E	12	ALL	640.00
25S	29E	16	ALL	640.00
25S	29E	32	ALL	640.00
25S	29E	36	ALL	640.00
25S	30E	6	ALL (includes Lots 1, 2, 3, 4, 5, 6, 7)	642.68
25S	30E	7	ALL (includes Lots 1, 2, 3, 4, 5, 6, 7)	642.28
26S	23E	2	ALL	793.53
26S	23E	16	ALL	640.00
26S	23E	32	Lots 1, 2, 3, 4	84.92
26S	23E	36	Lots 1, 2, 3, 4	88.20
26S	24E	2	E2, E2NW4, NESW	440.00

26S	24E	16	ALL	640.00
26S	24E	32	N2N2, Lots 1, 2, 3, 4	251.04
26S	24E	36	N2N2, Lots 1, 2, 3, 4	248.96
26S	25E	2	ALL	640.00
26S	25E	16	ALL	640.00
26S	25E	17	NE4	160.00
26S	25E	32	N2N2, Lots 1, 2, 3, 4	251.28
26S	26E	2	ALL	640.00
26S	26E	16	ALL	640.00
26S	26E	36	N2N2, Lots 1, 2, 3, 4	254.40
26S	27E	2	ALL	640.00
26S	27E	12	NWSW	40.00
26S	27E	16	ALL	640.00
26S	27E	24	ALL	640.00
26S	27E	25	ALL	640.00
26S	27E	36	N2N2, Lots 1, 2, 3, 4	256.40
26S	28E	1	W2, W2E2, NENE, SESE	560.00
26S	28E	2	ALL	640.00
26S	28E	3	ALL	640.00
26S	28E	4	ALL	640.00
26S	28E	5	ALL	640.00
26S	28E	6	ALL (includes Lots 1, 2, 3, 4)	639.76
26S	28E	7	ALL (includes Lots 1, 2, 3, 4)	639.12
26S	28E	8	ALL	640.00
26S	28E	9	ALL	640.00
26S	28E	10	ALL	640.00
26S	28E	15	ALL	640.00
26S	28E	16	ALL	640.00
26S	28E	17	ALL	640.00
26S	28E	18	ALL (includes Lots 1, 2, 3, 4)	639.28
26S	28E	19	ALL (includes Lots 1, 2, 3, 4)	640.36
26S	28E	20	ALL	640.00
26S	28E	21	N2, SW4, NWSE, NESE	560.00
26S	28E	22	S2SE4, SESW	120.00
26S	28E	22	N2N2, SWNW, SENE	240.00
26S	28E	27	ALL	640.00
26S	28E	28	NWNW	40.00
26S	28E	28	S2, S2NE4, NENE	440.00
26S	28E	29	W2, N2NE4, SWNE, SWSE	480.00
26S	28E	30	ALL (includes Lots 1, 2, 3, 4)	640.28
26S	28E	31	Lots 1, 2, 3, 4, 5, NENW, NWNE, NENE	255.51
26S	28E	32	Lots 1, 2, 3, 4, NWNW, NENW, NWNE	215.08
26S	28E	33	Lots 3, 4, NENW, NWNE, NENE	167.48
26S	28E	34	N2N2, Lots 1, 2, 3, 4	255.24

26S	28E	36	N2N2, Lots 1, 2, 3, 4	255.92
26S	29E	2	ALL	640.00
26S	29E	16	ALL	640.00
26S	29E	35	Lots 5, 6, 11, 12	110.41
26S	29E	36	N2N2, Lots 1, 2, 3, 4	255.60
				79231.57

Subsurface Estate Only:

TWP	RGE	Section	Description	Acreage(+/-)
23S	28E	36	ALL	640.00
23S	29E	32	N2N2, SWNE, SENE, E2SE4	320.00
24S	27E	32	ALL	640.00
24S	28E	25	SW4, SWNW	200.00
24S	28E	27	E2, E2W2	480.00
24S	28E	16	ALL	640.00
24S	28E	2	Lot 1, SENE, NESE, NWSE	159.75
24S	28E	26	SWNE, SENE	80.00
24S	28E	22	SESW, SWSE, SESE	120.00
24S	29E	27	NWNW	40.00
24S	29E	16	ALL	640.00
25S	24E	24	SESW	40.00
25S	24E	24	NWSE	40.00
25S	24E	24	SENE	40.00
25S	24E	16	ALL	640.00
25S	25E	16	ALL	640.00
25S	26E	36	ALL	640.00
25S	27E	32	ALL	640.00
25S	28E	35	SWNE, NWSE	80.00
26S	23E	9	SESW, SWSE	80.00
26S	24E	4	NWNW	40.00
26S	24E	5	NENE	40.00
26S	25E	36	N2N2, Lots 1, 2, 3, 4	251.60
26S	26E	32	N2N2, Lots 1, 2, 3, 4	252.23
26S	27E	32	Lot 1	23.35
26S	27E	32	NWNW, Lot 4	63.04
26S	29E	26	NWSE	40.00
26S	29E	27	N2N2, S2SW4, SENW, N2SE4	360.00
26S	29E	8	SWNW, NWSW	80.00
26S	29E	8	NENW, NWNE	80.00
26S	29E	22	S2S2, NWSE, NESE	240.00
26S	29E	26	W2NW4	80.00
26S	29E	23	W2SW4	80.00
				8429.97

Appendix C: Nexus Between Conservation Measures or Conservation Projects and Threats to the Covered Species (adapted from CEHMM CCA/A)

Threat	Conservation Measure	Covered Activity	Anticipated Result
Water Quality and Loss of Water Resources	Comply with SPCC requirements	Oil and Gas and Related Infrastructure	Prevent contamination
	Notify Commissioner within 72 hours after Emergency Operations that result in New Surface Disturbance		
	Maintain minimal stream flows and cease pumping if flows reach 9.3 cfs at the gauge located at the CID dam	Pumping Water For Sale, Gift, or Trade	Prevent loss of water resources
	No New Surface Disturbance in Occupied Habitat within the Black and Delaware rivers	All Participants	Prevent loss of water resources
	Install speed bump or lower speed limit at low water crossings	Eddy County (outside scope of this CCAA)	Prevent contamination by reducing chances of accidents.
Runoff and Erosion	Follow RAPPS requirements	Oil and Gas and Related Infrastructure	Reduce erosion and sedimentation
	Within the Black and Delaware rivers (excluding Zone A) and Blue Springs and their associated USGS 100-year floodplain, exercise good faith efforts to avoid Zone B	All Participants	
	Clear invasive vegetation and replant with native grasses, trees, or shrubs as specified in a Vegetation Management Plan	Agriculture and Ranching	
	Prevent cattle grazing in Sensitive Habitat Areas Occupied Habitat		
	Attempt to decrease and no increases in current agricultural practices in Zone A and B		
Collection	None		
Floods	Conservation Projects for bank stabilization and erosion control	All Participants	Prevent loss of water resources and habitat
Diminished Presence of Host Fish	The Commissioner will use funds for the reintroduction or stocking of host species	All Participants	Increase host fish
	Notify the Commissioner within 72 hours after Emergency Operations that result in New Surface Disturbance		Prevent contamination, prevent loss of water resources
	No New Surface Disturbance in Occupied Habitat within the Black and Delaware rivers		Prevent loss of water resources and habitat
Competition from Exotic Species	None		
Manmade Barriers	Removal or improvement/replacement of low water crossings when funding becomes available	Eddy County (outside scope of this CCAA)	Allow fish passage
General	Allow access to Enrolled Property upon appropriate notice to the Participant	All Participants	Allows for conservation projects, monitoring, and research of Covered Species

Appendix D: Certificate of Inclusion Template

CERTIFICATE OF INCLUSION FOR [Participant Name]
in the
New Mexico State Land Office Candidate Conservation Agreement with Assurances for the Texas Hornshell Mussel (*Popenaias popeii*) and other Covered Species

CI Number: _____

This certifies that the Participant described herein is included within the scope of the attached Candidate Conservation Agreement with Assurances (CCAA) with the New Mexico Commissioner of Public Lands for the Texas Hornshell and other Covered Species under the authority of Section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended (ESA), 16 U.S.C. 1531-1544. A Participant must be a lessee or grantee of state trust lands with a sufficient property interest to carry out the proposed management activities, subject to applicable state law, consistent with the definition of "property owner" at 50 CFR § 17.3.

The goal of the U.S. Fish and Wildlife Service (Service), New Mexico State Land Commissioner (Commissioner), and the Participant is to reduce and/or eliminate threats to the Texas hornshell and other Covered Species. By agreeing to conduct the Conservation Measures described herein, the Service will provide the Participant with regulatory certainty (assurances) concerning land-use restrictions that might otherwise apply should the Texas hornshell or other Covered Species become listed as a threatened or "endangered" species under the Endangered Species Act.

This Certificate of Inclusion (CI) is a voluntary agreement among the Service, Commissioner, and the Participant. Through this CI, the Participant voluntarily commits to implement Conservation Measures that will reduce and/or eliminate threats to the Texas hornshell and other Covered Species. By signing below, the Participant acknowledges that he or she has read and understands the CCAA and this CI. He or she further acknowledges that the CCAA may not be sufficient to prevent the listing of the species.

Participant's Name:

Business Name:

Address:

Phone:

Email:

I. ENROLLED PARCELS.

By executing this CI, the Participant affirms that to the best of its knowledge it is a lessee or grantee of state trust land with sufficient interest to carry out the Conservation Measures and any other management activities contemplated by this CI, the CCAA and the applicable enhancement of survival permit, subject to applicable state law, on enrolled, state trust land. This CI cannot be amended without the written agreement of all signatories.

A. Enrollment.

Enrollment of property in this CI does not guarantee approval of an application to cause New Surface Disturbance by regulatory agencies (state or federal) and subsequent approval of any permit does not guarantee adherence to the CI. The Participant is enrolling the following parcels (indicate which enrollment type and attach description of Enrolled Parcels):

_____ **Enrollment of All Activities on State Trust Land Parcels within the Covered Area.**
The Participant is enrolling all of its activities on state trust lands leases or grants it holds within the Covered Area. If requested by the Commissioner, GIS shapefiles of all Enrolled Properties on which the Participant operates must be supplied to the Commissioner prior to the CI being effective. For tracking purposes, the Participant will provide an update to the Commissioner of its Enrolled Properties on an annual basis, no later than October 1. Outside of this annual update, GIS shapefiles of all Enrolled Properties on which the Participant operates may be requested by the Commissioner or FWS on limited occasions by special request.

_____ **Parcel-by-Parcel Enrollment.**
If the Participant enrolls Parcel-by-Parcel, the Participant will provide a list of leases or portions of leases to the Commissioner that includes lease number, detailed legal description, and acreage for each enrolled parcel in this CI. If requested by the Commissioner, a GIS shapefile depicting the information is also required at enrollment.

B. Transfers of Enrolled Property by Participants to Third Parties.

Participants may transfer their interests in Enrolled Parcels to a third party before or after a listing decision. If a Participant chooses to transfer interest in Enrolled Leases to a third party, participation in the CCAA will only continue if the transferee is a Participant or elects to become a Participant through execution of a new CI.

If the transferee is not already a Participant and none of Covered Species is listed, the transferee may enroll in the CCAA at any time prior to listing of one or more of the Covered Species. If the transferee is not already Participant and one or more of the Covered Species is listed, the transferee may sign a new CI within 30 days of acquiring the Enrolled Parcels. All terms and conditions of the CCAA and CI will be assumed by the new Participant.

Transferors, and transferees that are Participants, are responsible for revising GIS shapefiles and lists of Enrolled Parcels to reflect transfers of Enrolled Parcels in annual updates provided to the Commissioner.

C. Addition and Removal of Enrolled Parcels.

This section addresses Participants' ability to add Enrolled Parcels to this CI when the Participants did not acquire parcels from an existing Participant. When one Participant seeks to add Enrolled Parcels received via transfer from another Participant, the Participant must follow the procedures outlined in section B, above. This section also addresses Participants' ability to remove Enrolled Parcels from this CI.

1. Addition and Removal of Enrolled Parcels by All Activities Participants.
Participants that enrolled via the All Activities method may add any Enrolled State Trust Lands for which Participant has a lease or grant to this CI, and may remove Enrolled Parcels from this CI, at any time, including after any decision to list a Covered Species. Participants will provide an updated GIS shapefile of Enrolled Parcels reflecting additions or removals as part of the next annual update to the Commissioner as described in Section A.

2. Additions to Enrolled Parcels by Parcel-by-Parcel Participants.
Participants that enrolled via the Parcel-by-Parcel method may add parcels to their lists of Enrolled Parcels prior to any decision to list a Covered Species. After any decision to list a Covered Species, Participants that enrolled via the Parcel-by-Parcel method cannot add parcels to their lists of Enrolled Parcels. Additionally, Participants that enrolled via the Parcel-by-Parcel method and are required to pay enrollment fees cannot remove parcels from their list of Enrolled Parcels until three years of Enrollment Fees are paid for the parcel.

If the Service in the future develops a policy allowing enrollment of new parcels in a CCAA after listing, it will consider whether to propose an amendment to this CCAA that would allow this CI to be amended to enroll additional property after listing, consistent with any potential criteria that may be developed if the Service allows post-listing additions in the future. For example, if one of the Covered Species is considered listed as "threatened" or "endangered" by the Service due to publication of the listing decision in the Federal Register, but due to unforeseen circumstances the species has no legal protection, enrollment of properties may be allowed until the Service publishes a status clarification in the Federal Register.

3. Replacement of Enrolled Parcels by Parcel-by-Parcel Participants.
The limitations on the addition of parcels to or removal of parcels from lists of Enrolled Parcels by Participants that enrolled via the Parcel-by-Parcel method described above do not apply when a Participant replaces an Enrolled Parcel with an unenrolled parcel. Participants that enrolled via the Parcel-by-Parcel method may amend this CI to replace an Enrolled Parcel with an unenrolled parcel of equal or less acreage before or after a listing decision ("Replacement of Enrolled Parcels"). Replacement of Enrolled Parcels cannot increase the total number of acres of Enrolled Parcels described in this CI. Once a Covered Activity results in New Surface Disturbance on an Enrolled Parcel, the entire parcel cannot be replaced with an unenrolled parcel.

All Replacements of Enrolled Parcels must be approved by the Service and the Commissioner. The Participant must provide written notification of the intent to replace any Enrolled Parcels to the Commissioner not less than 30 days prior to the replacement. The notification will include a GIS shapefile and a spreadsheet with the lease number(s), detailed legal description(s), and acreage of the parcel(s) involved.

D. Enrollment Fees and Habitat Conservation Fees

[INSERT SCHEDULE OF FEES, IF APPLICABLE]

E. In-Kind Contributions

[INSERT IN-KIND CONTRIBUTIONS, IF APPLICABLE]

II. PARTICIPANT AGREEMENT TO IMPLEMENT CONSERVATION MEASURES.

The Participant agrees to implement the following Conservation Measures to avoid and minimize impacts to Covered Species:

[INSERT CONSERVATION MEASURES]

VI. SUSPENSION AND TERMINATION.

A. Suspension.

The Participant agrees that the Commissioner, in coordination with CEHMM and the Service, can suspend any CI as it relates to some or all of the Enrolled Parcel identified in Exhibit A of the CI until the Habitat Conservation Fee or Enrollment Fee (if any) associated with the CI is paid. Regardless of enrollment method, the CI may be suspended with respect to a single Enrolled Parcel. The Service would not authorize incidental take of Covered Species resulting from any activities occurring on Enrolled Parcels for which the CI is suspended.

B. Voluntary Termination.

The Participant may terminate this CI by giving thirty (30) days written notice to the Commissioner and Service as to any or all of the Enrolled Parcels.

C. Involuntary Termination.

A CI may only be involuntarily terminated because of a Participant's failure to implement the Conservation Measures documented in this CI. If the Commissioner or the Service determines that a Participating Lessee is failing to implement the Conservation Measures agreed to in the CI, the Commissioner shall notify the Participant by mail and email of the nature of the violation and the corrective actions that are required. The Participant shall complete corrective actions within sixty days of receipt of the first notification, or, within fifteen days of receipt of the first notification, provide an explanation for why corrective actions cannot be completed within sixty days and an anticipated completion date. If corrective actions have not been completed within sixty days of receipt of the first notice or by a date specified by the Commissioner, the Commissioner shall provide a second notice of violation to the Participant by mail and email. If the Participant has not completed corrective actions within thirty days of receipt of the second notice, the Commissioner may issue the Participant a Conservation Measure Violation (CMV) by email and U.S. mail with proof of delivery.

A Participant that receives a CMV can request Executive Committee review by notifying the Commissioner by email, fax, U.S. mail, or in person within 30 days of receipt of any notice or CMV. The Executive Committee shall review the facts surrounding the issuance of the CMV and determine the outcome within 60 days of receiving the request for review from the Participant, and

will notify the Participant by email and U.S. mail with proof of delivery within 10 days of a determination.

In the case of Participant noncompliance with Conservation Measures that presents and immediate or severe threat to any of the Covered Species, the Commissioner shall request the Participating Lessee to correct the noncompliance immediately or within a specified period of time that is reasonable under the circumstances. Failure of the Participating Lessee to correct the noncompliance within the specified time will be deemed an unresolved CMV, subject to the Executive Committee review process described above.

A Participant's noncompliance that arises out of a single event or activity in one location and that affects more than one candidate conservation agreement for the Covered Species (i.e., any combination of the SLO CCAA, CEHMM CCAA, and CEHMM CCA) shall not be counted as a separate deficiency or CMV under each affected candidate conservation agreement. In such cases involving state trust land, the Commissioner and CEHMM will confer to determine whether one or both Parties will work with the Participant to address the violation. If a Participant acquires a total of three unresolved CMVs under any of the candidate conservation agreements for the Covered Species (i.e., SLO CCAA, CEHMM CCAA, or CEHMM CCA) in which the Participant is enrolled, the Commissioner may take actions, up to and including termination of some or all of the Participant's CI. Termination of all or a portion of a CI by the Commissioner shall constitute an agency determination as defined in Section 19.2.15.7.A. NMAC.

VII. PROPERTY ACCESS.

The Participant agrees to provide access to Enrolled Property to the Commissioner and the Service with reasonable prior notice.

VIII. CONFIDENTIALITY.

The Participant acknowledges that the Commissioner is subject to the Inspection of Public Records Act (IPRA), NMSA 1978, Section 14-2-1 et seq... The Participant understands and agrees that any sensitive or confidential business information that the Participant submits to the Commissioner, State Land Office, or CEHMM might be subject to disclosure under IPRA as a public record.

IX. NO WAIVER.

The Participant, by entering into this CI, does not concede its agreement with, or endorsement of, any underlying studies and conclusions in the CCAA. Further, the Participant does not waive any legal rights or remedies that may exist outside of this CI.

X. RELEASE.

If at any time any administrative or legal challenge prevents the implementation of this CI, the Participant agrees to release the United States Department of the Interior, the Service, and the Commissioner from any legal claims related to and against all other Parties to this CI and CCAA, and the Participant shall be excused from its performance. If at any time any administrative or legal

challenge to the CCAA prevents the implementation of this CI, the Commissioner agrees to release the Participant from any legal claims related to this CI and CCAA.

XI. AMENDMENT.

Any changes to the CCAA in effect at the time the Participant executes this CI may only be applied to the Participant upon its written consent. This CI may be amended with the written consent of each of the Parties hereto. The Parties agree to process requests for amendments in a timely manner. This CI may also be amended to accommodate changes to applicable legal requirements, including but not limited to the ESA, the NEPA, and the Service's permit regulations at 50 CFR 13 and 50 CFR 17.

XII. MULTIPLE ORIGINALS.

The Participant shall sign three original copies of the CI, which shall then be signed by the Service and the Commissioner. The date of the last signature shall be the effective date of the CI. The Commissioner shall mail one original CI to the Participant, one original to the Service, and will keep one original. Electronic signatures shall suffice for enrollment requirements. If electronic signatures are used, one copy of the CI shall suffice, and each signatory shall receive a copy of the electronic version.

XIV. NOTICE.

Any notice permitted or required by this CI shall be transmitted within any time limits described in this CI to the persons set forth below or shall be deemed given five (5) days after deposit in the U.S. mail, certified and postage prepaid, return receipt requested, and addressed as follows or at such other address as any Party may from time to time specify in writing to the other Parties.

Participant:
Contact:
Address:

Telephone:
Fax:
E-Mail:

USFWS

Texas Hornshell CCAA
USFWS-NMESFO
2105 Osuna Road NE
Albuquerque, New Mexico 87113
505-346-2525 (t)
505-346-2542 (f)

Commissioner

Commissioner Aubrey Dunn
New Mexico State Land Office
310 Old Santa Fe Trail

PO Box 1148
Santa Fe, NM 87504-1148

XV. SIGNATURES.

IN WITNESS, WHEREOF THE PARTIES HERETO have executed this Certificate of Inclusion to be in effect on the date of the last signature below.

[PARTICIPANT AND AFFILIATION]	Date
Aubrey Dunn Commissioner of Public Lands New Mexico State Land Office	Date
[AUTHORIZED OFFICER] United States Fish and Wildlife Service	Date

EXHIBIT A
Property Description for Enrolled Property

EXHIBIT B
Permit

EXHIBIT C
CCAA

Appendix E: Enrollment Fees and Habitat Conservation Fees (adapted from CEHMM CCA/A)

1. Enrollment Fees

Except as otherwise provided in the CI for certain types of Participants such as grazing lessees, or if in-kind services will be provided in lieu of Enrollment Fees, each Participant shall be responsible for paying an Enrollment Fee for the first three years of enrollment. If the Participant opts out of the CCAA before the end of three years, the Participant shall still be responsible for three years of Enrollment Fees. The Participant may choose from two enrollment options: All Activities or Parcel-by-Parcel. All Activities enrollment is the enrollment of all of a Participant's existing and future activities and facilities on state trust land and minerals within the Covered Area. Parcel-by-Parcel enrollment is the enrollment of parcels of state trust lands and minerals, including leases or portions of leases and rights-of-way, within the Covered Area. All Activities Enrollment ensures that a Participant can add new parcels in the event that a Covered Species is listed under the ESA.

If the Participant chooses the All Activities enrollment, the Participant shall pay an Enrollment Fee of thirty-thousand dollars ($30,000) per year for each of the first three years of enrollment, for a total of ninety-thousand dollars ($90,000). This Enrollment Fee will cover enrollment of the Participant's property interests on state trust land, including all existing and future activities and facilities, within the Covered Area.

If the Participant chooses the Parcel-by-Parcel enrollment, the Participant shall pay a minimum Enrollment Fee of $3,000 per year for three years for up to 1,000 acres. For all acreage above 1,000 acres, the Participant shall pay an additional $3 per acre per year for three years.

The Participant shall make the first payment of Enrollment Fees at the time of enrollment. The Participant shall pay the second and third Enrollment Fees on the first and second anniversaries of the CI effective date. If the Participant so chooses, the Participant may pay all three yearly Enrollment Fees at the time of enrollment. Enrollment Fees will not be required after the initial three-year period.

If a Participant enrolls in both the SLO CCAA and the CEHMM CCAA, the Participant need only remit a single Enrollment Fee for All Activities enrollment or a single base Enrollment Fee, plus per-acre charges for Parcel-by-Parcel enrollment.

2. Habitat Conservation Fees

Unless the Participant elects to contribute in-kind services, Participants may be required to pay Habitat Conservation Fees associated with New Surface Disturbances and seismic activities in accordance with the fee schedule below. Habitat Conservation Fees will be calculated based on the fee schedule and will be maintained in an account specific to this CCAA and the Participant's CI. Habitat Conservation Fees will be deducted from the Participant's account within 30 days of receiving the notice of a New Surface Disturbance or seismic activities. The Participant must

receive notice, both written and by electronic transmission, within 30 days of the deduction of Habitat Conservation Fees from the Participants account. This notice shall include the amount of fee deducted and the remaining balance in the Participant's account. Additional Habitat Conservation Fees would not need to be paid until Enrollment Fees and any prepaid Habitat Conservation Fees are exhausted from the habitat conservation fund. Participant may prepay more than the minimum Habitat Conservation Fees at any time at their discretion; however, prepaid funds will not satisfy the need for annual Enrollment Fees. After the initial three-year period, each Participant must still pay Habitat Conservation Fees for New Surface Disturbance or seismic activities in accordance with the fee structure.

Conducting New Surface Disturbance is at the discretion of the Participant. The Participant may elect not to conduct New Surface Disturbance or seismic activities after the Habitat Conservation Fees have been deducted. The Participant shall provide notice to the Commissioner and CEHMM if the proposed New Surface Disturbance has been cancelled, as described above. Any New Surface Disturbance or seismic activities would reinstate the need for notice to the Commissioner and CEHMM. Within 10 days of receiving notification of cancelled New Surface Disturbance or seismic activities from the Participant, the associated Habitat Conservation Fee will be refunded to the Participant's account.

3. Habitat Conservation Fee Schedule

The Habitat Conservation Fee for New Surface Disturbance associated with oil and gas development activities will be calculated using the following scales. The scales also apply to third parties doing work for the Participant either on or off the Participant's Enrolled Property, regardless of who constructs or operates the associated facilities. The Participant may prepay Habitat Conservation Fees at any time at their discretion. The Participant must notify the Commissioner prior to conducting any surface disturbing activities associated with this CI on or off the Enrolled Property either by the Participant or third-party subcontractors. Management zone of the New Surface Disturbance is determined by the location of the activity being developed, not actual habitat found on site.

All Habitat Conservation Fees will be adjusted once yearly by CEHMM to account for inflation or deflation. The term "Base Habitat Conservation Fee" shall refer to the values of the Habitat Conservation Fees set forth in this Exhibit. For purposes of this section, the term "CPI-U" shall refer to the Consumer Price Index for All Urban Consumers, U.S. City Average, all items less food and energy (base 1982-84=100), not seasonally adjusted, as published by the U.S. Department of Labor, Bureau of Labor Statistics. The Maximum Annual Inflation Increase shall be based on the percent increase between the annual average CPI-U for the calendar year that precedes the date of the adjustment ("Current CPI-U") and the annual average CPI-U for calendar year 2016 ("Base CPI-U"). The Maximum Annual Inflation Increase shall be calculated as follows:

Maximum Annual Inflation Increase =

Base Habitat Conservation Fee x ((Current CPI-U – Base CPI-U) / Base CPI-U))

Increases, if any, shall occur on the January release date of the CPI-U. The Maximum Annual Inflation Increase will reflect the most recent revision to the annual average Current CPI-U, if any. The Commissioner will send Participants a notification, both electronically and by mail, each year at the time the fees are adjusted.

If the annual average CPI-U is unavailable for a calendar year, no increases will be made. If the CPI-U is discontinued entirely or unavailable for a period longer than two calendar years, the Permit Holder will consult with the Participant to select an appropriate alternative index.

1) New Well Location Fees[1]

Management Zone	Conservation Fee
Zone A	Not applicable
Zone B	$20,000/location
Zone C	$10,000/location
Zone D	$ 2,500/location

[1] Includes well pad no larger than 3 acres and associated access road not to exceed 1 acre. Anything larger will be considered New Surface Development Fees described below. If any portion of the project falls into a higher management zone, the charge incurred will be that of the higher management zone.

2) New Surface Development Fees

For other New Surface Disturbances associated with Enrolled Property, but not directly attributable to a new well pad[2] and associated road, including but not limited to pipelines, frac ponds, electric lines, pits, etc. the Habitat Conservation Fee will be based on the following scale:

Management Zone	Conservation Fee[3]
Zone A	Not applicable
Zone B	$7,500/acre
Zone C	$2,500/acre
Zone D	$1,000/acre

[2] Co-located wells that require an increase in the size of the existing pad will be assessed by new acres disturbed.

[3] These Conservation Fees are based on the following figures. No additional amounts are owed beyond the amount of the Conservation Fees:

Lease of Water Rights	10 acre feet = $5,000-$10,000
Purchase of Water Rights	1 acre foot = $5,500-$10,000

Habitat Restoration (i.e., salt cedar treatment)	4 acres = $10,000
Caliche Removal	2-3 acres = $10,000
Reseeding	1 acre = $1,000
Rebuilding Water Crossings	Undeterminable at this time

Note: All acreage calculations will be rounded up to the next whole acre if the fractional acreage is equal to or greater than 0.5 acres. Acreage calculations will be rounded down if the fractional acreage is less than 0.5 acres.

New operations on previously disturbed land (e.g., co-located new well on an existing pad or new pipeline in an existing corridor, etc.) will incur no additional Habitat Conservation Fee, unless the area to be redisturbed has been reseeded and/or reclaimed as part of reclamation. Fees will also be assessed for any new acreage disturbed.

The Commissioner will calculate area of New Surface Disturbances based on information received and/or on-the-ground observation, and in a manner consistent with the calculation of area of New Surface Disturbance under the CEHMM CCA/A. Should the Participant disagree with the Commissioner's calculation of the area of New Surface Disturbance, the Participant has the right to challenge the estimate, provide supporting data, and meet with the Commissioner and/or the Service, if necessary. The Commissioner and the Service, if participating, will have the responsibility for the final determination of the area of New Surface Disturbance.

The Habitat Conservation Fee for above-ground powerlines will be calculated using the above scale for New Surface Development. The acreage of New Surface Disturbance will be based on information found in the OCD and State Land Office New Surface Disturbance activities approval document.

If New Surface Disturbance falls within two or more management zones, the amount of the Habitat Conservation Fee will reflect the amount of the New Surface Disturbance within each management zone.

3) Fees associated with new seismic data acquisition

Management Zone	3D Survey Conservation Fee	2D Survey Conservation Fee
Zone A	$10.00/acre	$200.00/linear mile*
Zone B	$ 7.50/acre	$150.00/linear mile*
Zone C	$ 5.00/acre	$100.00/linear mile*
Zone D	$ 1.50/acre	$ 25.00/linear mile*

*or any fraction thereof

The acquisition of seismic data on enrolled parcels may also disturb the surface of other land not enrolled in this CI. The Habitat Conservation Fee calculated for seismic activity includes disturbances occurring on both enrolled and non-enrolled land.

Routine production operations

Routine production operations are not considered New Surface Disturbance and shall not create the obligations to pay a Habitat Conservation Fee. Routine production operations are those that do not require an agency permit or approval, and those operations that require an agency approval but do not disturb the surface.

Appendix F: Covered Activities for State Land Office and Participating Lessees

This CCAA will cover the following activities occurring on state trust lands or minerals: oil and gas development; ranching, farming, or other agriculture; sale, gift or trade of water; and mining and solid mineral extraction. Any otherwise illegal activities (e.g., spills, etc.) will not be a Covered Activity under this agreement.

Seismic Activities and Land Surveying

Seismic activities involve surface or subsurface induced seismic pulses. Seismic activities are generally performed in the exploration phase of oil and gas development or in areas of existing development for refining knowledge of the geology and improving well siting. Seismic activities are conducted for periods of short duration (i.e., typically less than 30 days) in any given area. Activities may utilize large equipment to induce seismic pulses. Additionally, activities may include limited clearing of vegetation to allow equipment access for seismic work and consist of a small crew laying/stringing temporary cables and placing receivers on foot or possibly using off-highway vehicles (OHVs). A crew removes cables and receivers when the work is complete. Land surveying is a low-impact, temporary activity and may require some truck and/or foot traffic.

Construction

Construction is defined as the process of creating infrastructure or sites in support of one or more of the other Covered Activities. Below are some examples of covered construction activities. For ranching, this includes construction of access roads, fences, waterlines, or facilities such as barns and corrals. For farming, this could include construction of crop fields and access roads. For solid mineral sales, this could include construction of a quarry or pit. For water withdrawals, this could include construction of waterlines, pump sites, and electric lines. For oil and gas development, this includes, but is not limited to, construction of access roads, well pads or locations, reserve pits and other facilities for the disposal of waste, production-related equipment such as tanks and storage facilities, treaters, separators, dehydrators, electric and other utility lines and pipelines (e.g., gathering lines, flow lines, and distribution lines). For oil and gas activities, construction activities may involve the use of heavy equipment and trucking activities in clearing vegetation, contouring, compacting, stabilizing soils, and installing erosion control (including silt fencing, earthen berms, etc., per Clean Water Act permitting requirements). Well-site construction may also include erecting temporary fencing and netting around a location, or portions thereof, for livestock and wildlife protection. A water well, disposal well and/or injection well may be drilled near the location and possible boring and trenching-related activities associated with installation of flow lines, pipelines, and utilities may occur. Associated infrastructure for compressor facilities and gathering/processing facilities may also be constructed on site or at adjacent sites. Where practical, equipment may be electrified (which greatly reduces noise and emissions from gas/diesel driven equipment), which involves the installation of in-field electrical distribution systems (poles, transformers and overhead wires). Activities may be conducted to plug and abandon a well, which may involve workover rig mobilization, and removal of facility equipment and associated infrastructure, access roads, abandonment in place of subsurface lines, and surface remediation/restoration pursuant to lease and

regulatory requirements. Construction may also include activities associated with Emergency Operations such as mobilization of heavy equipment, building structures, and any associated remediation and restoration activities associated with the Emergency Operations.

Drilling, Completion, and Workovers (Re-Completion)

Drilling, completion, recompletion, and workover activities may include, but are not limited to, construction, rig mobilization, which can include heavy equipment, 24-hour continuous operations, hydraulic fracturing, and frequent traffic. Well-site fencing may be utilized after completion operations for security purposes and to limit access.

Routine Production Operations and Maintenance

Routine production operations and maintenance may include, but is not limited to, stimulations, wellbore repair, daily site inspections and maintenance, testing, pipeline, gathering line and flow line repairs, right-of-way and road maintenance, unloading of storage tanks, truck traffic for removal of product or waste, emergency activities, workovers, recompletions, flaring, weed control, pipeline pigging activities, and regulatory inspections.

Remediation Activities and Restoration Activities

Remediation activities and Restoration Activities include, but are not limited to, removal and restoration of: access roads, fences, well pads or other improved locations, mineral pits, retired farm fields, removal of low-water crossings or diversion dams, reserve pits and other facilities for the disposal of waste, tanks and storage facilities, treaters, separators, dehydrators, electric and other utility lines and pipelines (e.g., gathering lines, flow lines, and distribution lines, waterlines), and associated infrastructure for compressor facilities and gathering/processing facilities. Remediation activities and Restoration Activities may also include any conservation projects or actions that benefit the Covered Species and their habitats listed in this document.

Use of Low Water Crossings

Use of low water crossings by Participants and their designated affiliates (i.e., contractors, employees, etc.) is a Covered Activity if speed limits and other traffic laws are observed.

Grazing

Grazing of livestock will be a Covered Activity if done in accordance with current and future BLM standards as described in the current RMP, and the Conservation Measures described in the Participant's CI.

Building and Maintaining Fences

Construction and maintenance of new and existing fences for agricultural purposes will be a Covered Activity if done in accordance with BLM standards and the Conservation Measures described in this agreement and the Participant's CI.

Farming and Irrigation

Farming and irrigation for agricultural purposes will be a Covered Activity if done in accordance with BLM and Natural Resources Conservation Service (NRCS) standards and the Conservation Measures described in this agreement and the Participant's CI.

Pipeline Boring

Pipeline boring for industrial purposes will be a Covered Activity if done in accordance with applicable statutory and regulatory standards (e.g., Federal Energy Regulatory Commissions (FERC) guidelines) and the Conservation Measures described in this agreement and the Participant's CI.

Solid Minerals Mining

Solid minerals mining will be a Covered Activity if done in accordance with BLM, their Mine Operations Plan (MOP), and the Conservation Measures described in this agreement and the Participant's CI.

Water Pumping

Pumping of groundwater or surface water for agricultural, livestock, or industrial uses will be a Covered Activity if done in accordance with regulations set forth in valid, existing water right permits and the Conservation Measures described in this agreement and the Participant's CI.

Conservation, Research, and Monitoring

Conservation, research, and monitoring projects performed or approved by the Executive Committee will be Covered Activities. Projects may include, but are not limited to, mark/recapture studies, presence/absence surveys, captive breeding and reintroduction, population surveys, habitat assessments, water quality monitoring, and other similar activities to study, monitor, and assess the species.